4. ICDF COMPLEX OPERATIONS

This section addresses operation of the ICDF Complex. It is subdivided into 14 relevant areas such as waste tracking, predisposal and landfill operations, evaporation pond and leachate management, startup testing, and emergency response.

4.1 Waste Tracking

Waste tracking including submitting and accepting waste into ICDF; waste packaging, shipment, and receipt; tracking inventory and compliance limits; and reporting and corrective action.

4.1.1 Introduction

Waste will be tracked at the ICDF Complex using the INEEL Integrated Waste Tracking System (IWTS). IWTS is used across the INEEL to track hazardous, low-level, and mixed low-level waste. The system is a replicated client-server application distributed on numerous servers across the INEEL. IWTS will be used at the ICDF Complex to track: (1) wastes entering the Complex, (2) treatment (e.g., microencapsulation, stabilization, repackaging), (3) disposal (e.g., landfill, evaporation ponds), (4) generation (e.g., PPE, contaminated maintenance waste, decontamination waste), and (5) off-Site shipment (e.g., Envirocare of Utah). This will ensure that complete, generation-to-disposition tracking of waste is performed. IWTS provides documentation regarding source, waste characterization, and hazardous and radioactive constituents. Tracking of the waste destined for disposal at the ICDF Complex will begin at the ICDF Complex user's dig site and end with final disposition (e.g., disposal, off-Site shipment). A detailed description of the waste tracking process and the IWTS is provided in Appendix C, "ICDF Complex Waste Tracking Plan" (PLN-914) of DOE-ID (2003a). An overview of the waste tracking process is provided in Figure 4-1.

Two specific applicable or relevant and appropriate requirements (ARARs) in the Operable Unit (OU) 3-13 Record of Decision (ROD) (DOE-ID 1999) deal with waste tracking (i.e., recordkeeping and surveying requirements) (items (a) and (b) below) (from 40 CFR).

§264.309 – The owner or operator of a landfill must maintain the following items in the operating record required under §264.73: (a) on a map, the exact location and dimensions, including depth of each cell with respect to permanently surveyed benchmarks; and (b) The contents of each cell and the approximate location of each type of hazardous waste.

IWTS will be used in conjunction with Geographic Information System (GIS) services to generate a 3-D grid map, which will show disposition of each load in relationship to the permanent bench marks.

4.1.2 Initiation of Waste into the ICDF

Characterization of all waste submitted for acceptance into the ICDF Complex is the responsibility of the ICDF Complex users. The ICDF Complex user may use either acceptable knowledge or sampling and analysis to characterize waste. Acceptable knowledge includes both historical data and process knowledge. An explanation of acceptable knowledge and the appropriate use thereof are explained in *ICDF Complex Waste Acceptance Criteria*, Section 2.4, "Physical and Chemical Characterization," and Section 2.5, "Radiological Characterization" (DOE-ID 2002e). If process knowledge is used rather than (or in addition to) sampling and analysis, documentation must be provided to demonstrate that the information is sufficient to accurately and completely characterize the waste stream.

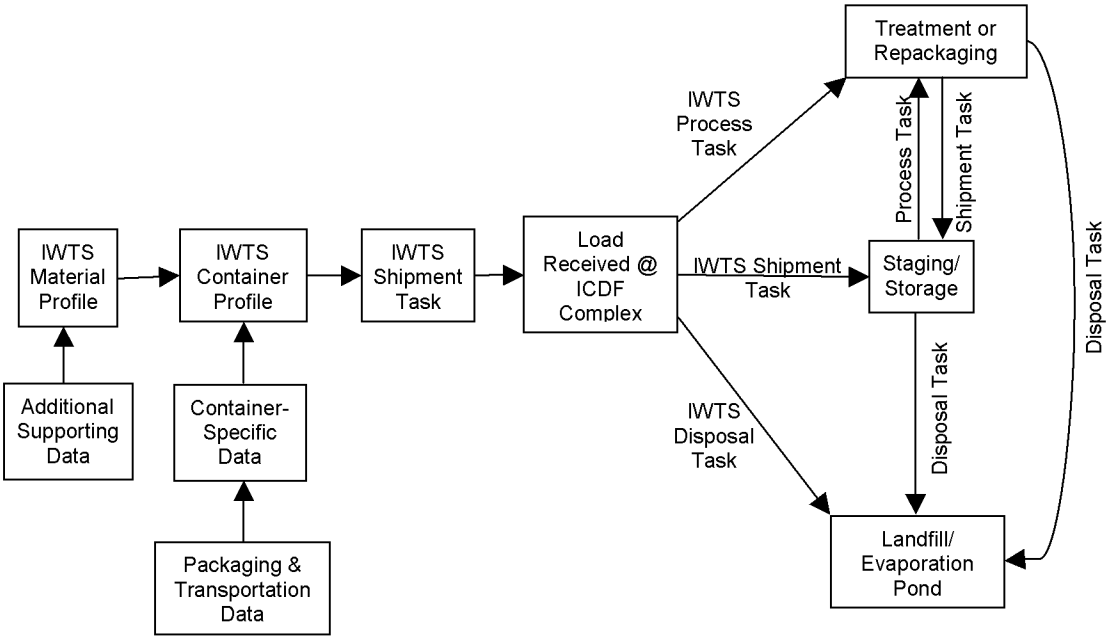

Figure 4-1. ICDF Complex waste tracking process.

Before waste is accepted into the ICDF Complex, an IWTS Material Profile must be completed by the ICDF Complex user and provided to the ICDF Complex management. In addition, the waste must be on the ICDF Complex schedule.

All ICDF Complex users must provide long-term and operational project schedules to ICDF Complex management and operations for planning purposes. Information necessary for the long-term schedules, includes, at a minimum, the estimated start date, completion date, waste volume, general class of waste, primary waste forms, and any anticipated need for treatment at the ICDF Complex.

4.1.3 Waste Acceptance into the ICDF

The ICDF Complex user completes an IWTS Material Profile for each waste stream. The Material Profile documents all chemical, radiological, and physical characteristics of a waste stream. IWTS automatically assigns the Material Profile a unique identification number, beginning the process of electronic tracking of the waste.

The ICDF Complex operations manager or his designated alternate reviews the Material Profile and electronically accepts or rejects the waste stream. Once the Material Profile has been approved by ICDF Complex management, the ICDF Complex user has approval to send the waste to the ICDF Complex.

An IWTS Container Profile is used to track individual containers of waste belonging to a waste stream identified by, and electronically tied to, the Material Profile. A container in IWTS is defined as a parcel of waste with a defined volume and weight, such as a box, roll-on/roll-off, dump truck, or drum. The Container Profile identifies all chemical, radiological, and physical characteristics for each container. These characteristics are entered as specific values bounded by the maximum/minimum ranges of the associated Material Profile.

The ICDF Complex user completes a Container Profile for each container of waste to be shipped to the ICDF. A unique barcode number is manually applied to the container and used as the identifier when the corresponding Container Profile is created in IWTS. This barcode number identifies the physical container and electronically ties it to the appropriate Container Profile. After both the Material and Container Profiles are approved, the waste will be assigned a shipping date to the ICDF Complex.

4.1.4 Waste Packaging and Shipment

The ICDF Complex user is required to properly package, mark, and label their waste per the appropriate set of ICDF Complex WAC (DOE-ID 2002a; 2002c; 2002e) and DOT requirements (if applicable). In addition, the user is responsible to prearrange the delivery time and date of all waste shipped to the ICDF Complex. The unique barcode number assigned to the container when the Container Profile was created is applied at the time of packaging. All waste packaged for shipment to the ICDF Complex will be visually inspected by ICDF personnel before shipment to ensure (1) that the waste matches the approved Material and Container Profiles, (2) that the waste does not contain prohibited material (e.g., free liquids), (3) that void space requirements are met (if applicable), and (4) that the containers are compatible with waste contents.

Prior to shipping, the ICDF Complex user completes an IWTS Shipment Task. The container barcode numbers, shipping date and time, originating facility, receiving unit, certification/approval, and other container and shipment-specific information are entered on the IWTS Shipment Task. Before the physical shipment leaves the ICDF Complex user's site, necessary updates (e.g., shipment date and time) to the Shipment Task are input, and the "Execute send" portion of the Shipment Task is completed. In addition, the individual OWTFs are printed for each container on the Shipment Task. OWTFs accompany each container to the ICDF Complex and are turned over to ICDF Complex personnel along with the container.

4.1.5 Waste Receipt

Upon arrival at the ICDF Complex, the electronic documentation (e.g., IWTS Material Profile, Container Profiles, Shipment Task) and paperwork (e.g., OWTF, Universal Hazardous Waste Manifest, Bill of Lading) accompanying each shipment of waste will be checked, as a minimum, for the correct Material Profile number, correct Container Profile numbers, designated number of containers, volume/weight of the waste, adequacy of shipping documentation, and appropriate marking and labeling of containers. Additional verification will be performed on a random basis, as determined by the ICDF quality assurance officer. The vehicle is weighed, and the gross weight recorded on the OWTF.

After the shipment has been receipt-inspected, ICDF Complex personnel sign off on the OWTF as shipment accepted, and electronically accept the waste by completing the "shipment received" portion of the IWTS Shipment Task.

4.1.6 Waste Designation

The shipment is considered received at the ICDF Complex when the load has been receipt-inspected and the proper documentation allows for acceptance of the shipment. At this time, ICDF Complex personnel complete the "shipment received" portion of the IWTS Shipment Task. Once the waste is accepted, various IWTS tasks (e.g., shipment, process, disposal) are created to electronically transfer and track the waste, depending on whether the waste will be stored, staged, treated, repackaged, or direct disposed. An IWTS Shipment Task will be used to transfer the waste to a staging or storage area. A Disposal Task will be used to transfer waste to the landfill or evaporation pond for direct disposal, and a Processing Task will be used to transfer waste being treated or repackaged. More detailed information on how the tasks are used for waste tracking is provided below and in Appendix C of DOE-ID (2003a).

4.1.6.1 Waste Staging and Storage. Waste arriving at the ICDF Complex may be staged or stored for a variety of reasons, such as awaiting treatment. The SSA is currently storing CERCLA waste awaiting treatment or disposal at the ICDF Complex. Once the ICDF Complex becomes operational, a portion of the SSA will be operated as a 40 CFR 264.554 unit to provide staging for incoming solid waste (e.g., soil, debris) awaiting treatment and subsequent disposal in the landfill. Another portion of the SSA will be operated as a 40 CFR 262.34 unit providing storage for incoming and ICDF Complex-generated liquid waste awaiting disposal at the evaporation pond. A detailed description of the ICDF Complex's staging and storage areas is provided in Section 5 of this document.

An IWTS Shipment Task will be used to electronically move the waste from receiving into the appropriate storage unit. Upon physical receipt of the shipment, specific locations will be assigned each container and noted on the OWTF. The locations are documented in IWTS, ensuring precise tracking of waste containers within the storage area.

The ICDF Complex contains several staging areas. An IWTS Shipment Task will be used to electronically move waste from receiving into one of these staging areas. The process is the same as described above, except the receiving unit will be a staging area.

4.1.6.2 Waste Disposal. An ICDF WGS representative will be present at the dig site to ensure waste being packaged for the ICDF is WAC-compliant (e.g., no free liquids, void space requirements are met) and congruent with the corresponding IWTS Material Profile that was reviewed and approved by ICDF personnel. Technical procedures will be developed as part of the O&M Manual that will guide this activity. Free liquid verification procedures are in DOE-ID (2003d).

If the waste meets the ICDF landfill WAC, the waste may be taken from the receiving area directly to the landfill for disposal. An IWTS Disposal Task will be used to track waste being disposed at the landfill. Disposal of waste that has first been stored, staged, or treated at the ICDF Complex follows the same tracking process. The only difference is that the originating facility for the IWTS Disposal Task will be the storage, staging, or treatment unit where the waste came from. The OWTF will accompany the waste to the landfill, and the specific grid where the waste is placed will be noted on the OWTF. This information will be added to the IWTS Disposal Task before completion ensuring the precise disposal grid coordinate for the waste within the landfill is documented.

Aqueous waste that meets the evaporation pond WAC may be sent directly to the pond for disposition. An IWTS Disposal Task will be used to electronically move the waste from the receiving area into the evaporation pond. The process is the same as described above for the landfill, except the disposal unit will be the evaporation pond. The cell where the waste is placed will be noted on the OWTF for entry into IWTS, similar to the landfill grids.

If a waste is being sent off-Site, a Shipment Task will be created and executed to track the waste to the appropriate off-Site facility.

4.1.6.3 Waste Processing. Upon receipt, waste may be processed at an ICDF Complex treatment unit. Processing options at the ICDF Complex include either stabilization, debris treatment, or repackaging. Waste not meeting the landfill or evaporation pond WAC may be sent to a treatment unit if it meets the treatment unit's WAC (DOE-ID 2002e). An IWTS Process Task will be used to electronically transfer waste (e.g., constituents and associated quantities) and any regulatory designations (e.g., EPA codes, underlying hazardous constituents) from an original container into a receiving/destination container. When treatment of the waste is completed, a Shipment Task will be used if the receiving/destination container is to be placed into storage; and a Disposal Task will be used if the receiving/destination container is to be sent to the landfill.

Waste being shipped to an off-Site treatment, storage, and disposal facility may require repackaging into containers that meet DOT packaging requirements or the off-Site WAC. Waste may be removed from its original container and placed in an appropriate new container, or the original container may be over-packed into a new container. This work will be conducted in the decontamination building and may be performed in either the treatment area or decontamination bay. An IWTS Process Task will be used to track waste being repacked.

4.1.7 Inventory Tracking and Compliance Limits

Inventory histories for all ICDF storage, staging, treatment, and disposal locations will be used to provide real-time data on the current inventory and ensure compliance with facility limits (e.g., operational, WAC). Location-specific inventories are maintained by physical properties (e.g., individual container ID #, total container count, total volume and weight), radiological properties (e.g., fissile material, individual radionuclides and activities), and chemical properties (e.g., constituents and amounts). Accurate inventory tracking relies on the timely creation and completion of transactions (e.g., Shipment and Disposal Tasks).

Numerous compliance checks (e.g., physical, radiological, chemical and other, operational) have been built into the IWTS. "Physical Inventory" checks include gross and net weight, gross and net volume, and container count. "Radiological Inventory" checks include fissile material, reportable quantities, less than DOE category III, and user-defined nuclides. "Chemical and Other Inventory" checks include threshold quantities, threshold planning quantities, reportable quantities, flammable material, and user-defined materials. "Operational Inventory" checks include LDRs, IDAPA, NESHAP, groundwater COCs, and TRU radionuclide concentration. Limit compliance reports have been prepared for each of the limits identified above and are available for the various locations at the ICDF Complex. Limit evaluations are electronically stored for each task and provide objective evidence demonstrating limit compliance.

4.1.8 Reporting

IWTS contains many standardized reports accessed directly in the software. These reports deal with the day-to-day operations of the ICDF Complex, such as inventories, limit compliance, and process and disposal activities for specified locations. Other reports, such as regulatory-driven or management-level reports, are obtained through Microsoft Access or web-based applications. Section 9.2.2, "Nongroundwater Monitoring Data Submittals and Notifications," of this document describes required reports for the ICDF Complex that may be supported by IWTS data.

4.1.9 Corrective Action

Noncompliant waste received at the ICDF Complex will require appropriate resolution before waste acceptance. Resolution alternatives may include, but are not limited to, correction of the noncompliant condition at the ICDF Complex, conditional acceptance of the waste at the ICDF Complex, temporarily (e.g., not to exceed 10 working days) placing the waste in the truck holding area until resolution of the issue, or returning waste to the generating WAG. A waste specialist will be contacted prior to returning waste to the generating WAG to ensure all regulatory issues are appropriately considered.

If, upon receipt inspection of the shipment, documentation is incomplete or incorrect, the waste will be moved to the truck holding area inside the ICDF Complex fence pending resolution. The waste may be held in this area (not to exceed 10 working days) before being sent to a compliant staging or storage unit, or returned to the generating WAG.

ICDF Complex management will work with the generating WAG to resolve noncompliant conditions in a timely manner. Resolution may include contacting the generating WAG to correct

discrepancies on the Material Profile, obtaining more information, correcting mislabeling, etc. In addition to immediate resolution of the noncompliant conditions, further steps will be taken to determine the underlying cause of the problem and implement corrective actions as necessary to prevent reoccurrence. Reoccurrence of noncompliant shipments from a generating WAG may result in rejection of the Material Profile and termination of shipments until the issues have been resolved.

4.1.10 Records Management

All records will be kept on file at the ICDF Complex as outlined in the Federal Facility Agreement and Consent Order (FFA/CO) (DOE-ID 1991). The records and documents that will be kept and maintained include IWTS Material and Container Profiles and supporting documentation, map/cell locations of wastes, shipping documentation, inspection records, tank records, groundwater monitoring data, environmental compliance monitoring data, and asbestos-TSCA waste records. Detailed information on the ICDF Complex records management system, including a complete list of documents to be kept, is provided in Section 10 of this document.

4.2 Waste Loading and Transportation Requirements

This section pertains to waste loading and transportation requirements within the confines of the ICDF Complex. Prior to loading containerized waste, the container will be inspected to ensure that it is in good condition with no visible cracks, holes, bulges, substantial corrosion, or other damage that could compromise container integrity. If a dump truck or roll-on roll-off is used, a liner will be installed to prevent the release of hazardous constituents and to prevent contamination of the bed or container. ICDF Complex health and safety procedures for handling containers shall be invoked, and appropriate slings and lifting devices shall be used for packages loaded with a crane. Waste containers will be loaded so that containers holding incompatible wastes are separated by the proper means. During loading and transportation, containers will remain closed, unless it is necessary to remove or add waste from the container.

Containers shall not be handled in a manner that will cause leakage. If a container is breached during loading or transportation, appropriate spill control measures will be invoked, and waste will be transferred from a leaking container to a container with good integrity.

When loading containers other than roll-on/roll-off boxes, the containers must be configured on the transport vehicle for safe unloading by a forklift or crane (if using roll-on/roll-off boxes, the box will already be placed on the transport vehicle prior to arrival at the remediation site). Once containers are loaded, the load will be inspected to ensure that container markings are clearly visible and display the estimated gross weight.

The OWTF will be transported with the load to the appropriate location, and the location will be recorded.

For more information, see Overview 4.2 in Appendix A of this document.

4.3 Predisposal Operations

4.3.1 Waste Receiving and Inspection

Waste received at the gate will be verified through a combination of inspections of the incoming shipment and cross-checks against the Material Profile. The minimum number of checks will include the Material Profile number, number of containers, and types and labeling of containers.

At the dig site, a specific number of verification samples will be collected. The purpose of these samples is to ensure waste is within the Material Profile and ultimately the WAC and to ensure the waste is as expected (i.e., no new contaminants are identified).

4.3.2 Waste Stabilization/Treatment

The process for soil stabilization is shown as a general schematic in Figure 4-2. A complete design was submitted in the SSSTF RD/CWP and, if necessary, this document will be revised. The treatment process is designed to treat contaminated soil and aqueous liquids/sludges. These CERCLA wastes with RCRA metals as contaminates of concern will be stabilized using a Portland-cement-based mixture as described in DOE-ID (2003h), Appendix I of the RAWP. Portland cement will be the primary binding agent used for stabilizing the waste. Admixtures, including flyash, blast furnace slag, and sodium sulfide, may also be used in a chemical fixation and stabilization (CFS) formulation. The object of cement-based stabilization is to produce a treated soil to met the following criteria:

- Reduce the heavy metal leachability to LDR/UTS levels to meet the IDCF landfill WAC
- Exhibit no free liquid
- Exhibit a friable or crumbly consistency to allow easier posttreatment handling of the waste.

The process schematic identifies the main components of the stabilization process and shows how these components are connected. The key components of the process include the vertical lift tipper, the mixer unit, bulk bag unloader, roll-on/roll-off container, and baghouse/HEPA filter. The information presented below provides a brief description of the soil stabilization process and key components.

- Vertical lift tipper (e.g. National Bulk Equipment, Inc. model 21-800)—Waste soil contained in 2- × 4- × 8-ft and 4- × 4- × 8-ft plywood engineered boxes will be loaded onto the vertical lift tipper assembly. The boxes will be loaded into the tipper with the 8-ft dimension being located inward towards the tipper. The tipper is equipped with a screen (to separate out > 6-in. material) that clamps down onto the top of the box, securing it to the tipper. The tipper will raise the box, invert it 180 degrees, and position it onto the top of mixer unit. The box will remain on the mixer during treatment to function as a cover. Light vibration or agitation may be applied to the box to ensure the waste passes the screen mesh.

- Mixer unit (e.g., Besser Mixing Technology MSO 3700 Twin Shaft Gemini)—Once the soil is loaded into the mixer, an operator adds water and the cement mix at predetermined proportions. The proportions of the reagents are metered into the batch by instrumentation on the water supply line and bulk bag unloader. After the reagents are added, the mixer unit is turned on and allowed to run until a homogeneous mix is achieved. This mixer is able to handle mixes with aggregates up to 6 in. Synchronized shafts of the mixer unit force a low shear in the mix allowing every particle in the mix to be coated with cement.

- Roll-on/roll-off container—After the homogeneous mix is achieved, the batch is discharged into a roll-on/roll-off container through a bottom-mounted discharge gate. The discharge gate is then closed, the waste box is lowered and removed from the tipper, and the roll-on/roll-off is moved ahead one-third its length to allow room for the next batched to be processed. Ten-cubic-yard roll-on/roll-off boxes will be used and will accept up to three full batches.

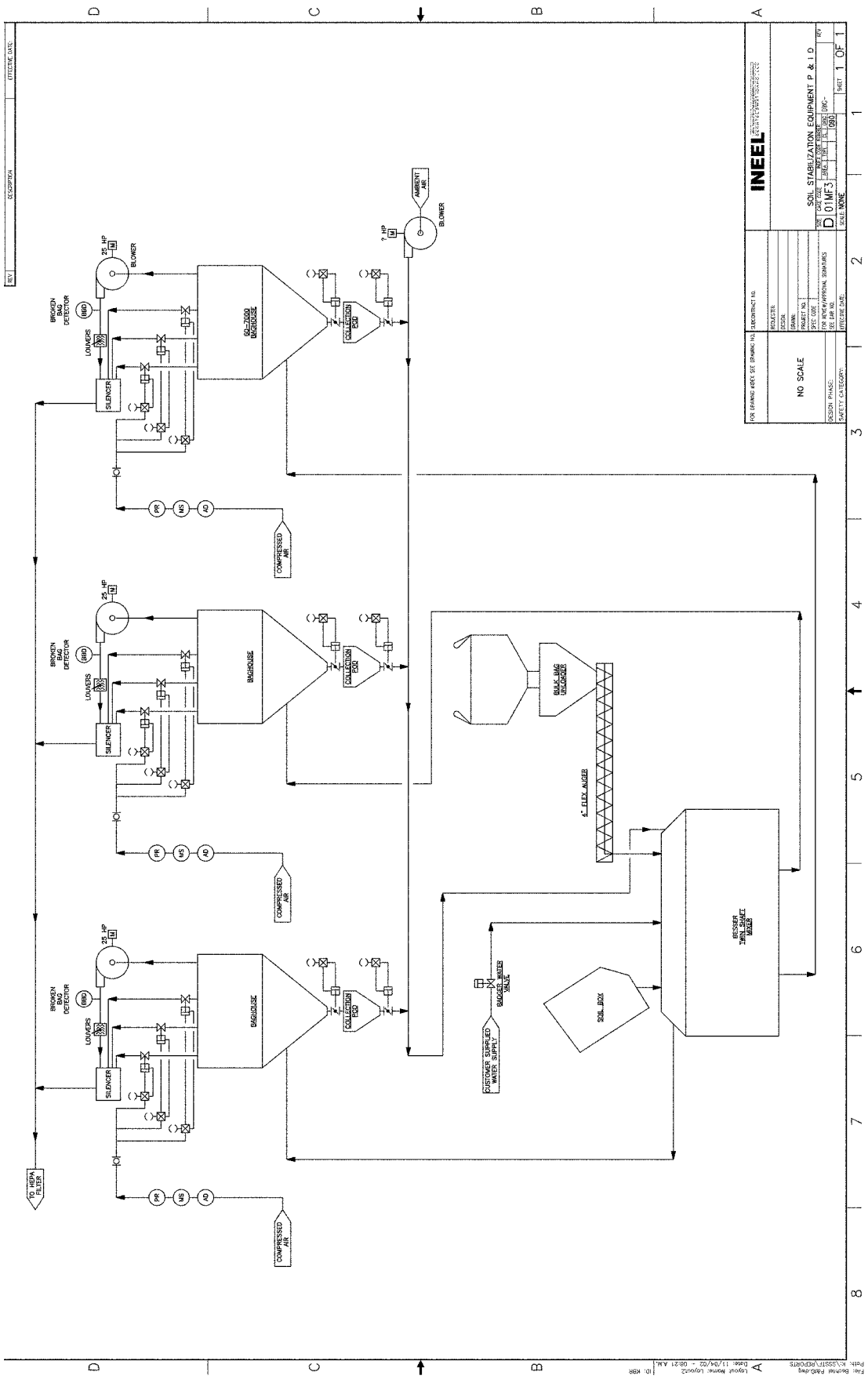

Figure 4-2. Process schematic for soil treatment.

- Baghouse (e.g., Bessser Model 60-7000A)—Dust generation will be controlled by a dual-stage control system consisting of a baghouse (first stage) followed by HEPA filtration system (second stage). The ventilation points for the process are located at the key points where dust will be generated: at the soil box discharge to the mixer, at the reagent discharge to the mixer, and at the mixer discharge to the roll-on/roll-off. Dust collected by the baghouse will be injected into the mixer and treated with a subsequent batch of soil. Baghouse dust collection and injection will be conducted in a closed system to minimize worker exposure and release of contaminated dust.

Treatment of liquids/sludges will occur by adding the liquids/sludges to waste soil in the mixer unit. Bulk loads of waste liquids/sludges will be transferred from bulk transport containers to an operations tank located at the treatment unit. The liquids/sludges will be added to the mixer unit by way of a stand- alone transfer pump and pipe assembly. The quantity to be added to the waste soil will be determined by treatability studies or batch treatment operations. The goal is to add a low quantity of liquid or sludge so there will be no detrimental effect on the treatment formulation for the soil.

Each roll-on/roll-off of treated soil will be sampled for verification the soil meets the land disposal restrictions and free liquids rule prior to being sent to the landfill for disposal. The material removed by the screen will be collected in a debris box and processed through the debris treatment process described in Section 4.3.5. Whenever the waste stabilization treatment process is employed the final matrix will carry all appropriate waste codes and be sampled/analyzed to ensure the applicable 40 CFR 268 standards are met.

4.3.3 Waste Storage

Waste requiring storage pending treatment and/or disposal will be placed in specified areas at the ICDF Complex. Containers holding incompatible wastes will be separated by proper means and containers will remain closed unless it is necessary to remove or add waste to the container. Weekly inspections and inspections after a significant storm event will be performed and documented for storage areas containing waste. A significant storm event is defined as 0.85 in. of rain in a 24-hour period and/or sustained winds greater than 35 mph, as measured at the CFA National Oceanic and Atmospheric Administration (NOAA) station. Appropriate spill control measures will be invoked when a container has been breached, and spill notifications and paperwork will be completed, as required. Appendix A contains detailed container inspection and storage requirements.

4.3.4 Waste Staging

Waste staging will be used to facilitate the operation of the ICDF Complex. Waste staging refers to temporary holding of remediation waste with an immediate intent of processing. Remediation waste may be staged while pending treatment, repackaging, testing, and/or disposal while remediation of other waste proceeds. This is anticipated to improve the efficiency of remediation of INEEL CERCLA sites.

Staged wastes may be in containers, tanks, or storage piles, though only solid nonflowing waste will be placed in stockpiles. The ICDF Complex contains several staging areas, each with a specific purpose or activity as discussed in Section 5. Wastes may be staged in either bulk or containers depending on material and origination. Remediation wastes from within the AOC may be staged in containers or stockpiles. Containerized and stockpiled remediation waste in staging areas will be managed to the meet the standards and operational requirements described in Section 5. Verification of compliance to Section 5 will be performed through routine inspections of staging areas.

4.3.5 Debris Treatment

Treatment of hazardous debris subject to the "Treatment Standards for Hazardous Debris" (40 CFR 268.45) will occur at the decon building. All debris entering the treatment process must meet the definition of debris in 40 CFR 268.2 (g). Portland-cement-based microencapsulation was selected as the debris treatment process as described in EDF-1730 in DOE/ID-10889 (DOE-ID 2002d). This process is an EPA-approved alternative treatment technology listed at 40 CFR 268.45. Microencapsulation encases the hazardous debris in inorganic materials (Portland cement) to substantially reduce the surface exposure to potential leaching media. This treatment process will be performed in a nonintrusive manner to reduce exposure potential to those workers conducting the treatment. The components to the debris treatment process are the grout hopper/reservoir, positive displacement pump, hose, and box brace. Debris treatment equipment is portable and will be used in either the treatment area or decon bay of the decon building.

Portland-cement-based grout will be used for microencapsulation of the hazardous debris. A flowable grout is needed in order to fill debris boxes without removal of the box lids or handling of the debris. Properties of grout considered during the selection phase included

- Low quantities of bleed water as setting occurs
- Low shrinkage to minimize cracks and voids
- Adequate strength to minimize potential for cracks during box handling
- Low unit weight in order to minimize the box weight.

Table 4-1 describes the grout mixtures that have been selected. Mix No. 1 does not include sand. It is very flowable but will have more potential for bleed water, shrinkage, and shrinkage cracks. It has been used for previous projects and its properties are fairly well understood.

Table 4-1. Grout mixes for the debris treatment process.

	Estimated Batch Weights	
Material	Mix. No. 1	Mix No. 2
Water	800 lb (96 gal)	433 lb (52 gal)
Cement (Type I/II)	680 lb	320 lb
Fly ash	1,600 lb	640 lb
Pumice sand	None	1,400 lb
High range water reducer	Approx. 6 lb	Approx. 8 lb

Mix No. 2 contains pumice sand. It has better properties but is less flowable. The mix design is only a starting point for trial mixes. No testing has been performed to verify that the material proportions are appropriate. Tests will be required prior to use of Mix No. 2.

The quantity of water and high range water reducer will vary to adjust the flowability of the grout mixture. The quantity of lightweight sand will need to be adjusted based on the specific gravity of the sand.

Trial mixes of the grout will be tested in simulated debris boxes to ensure that the grout will flow around the debris as required.

The information below provides a brief description of the steps for debris treatment:

- The box containing the hazardous debris will be placed in a debris box brace.
- The box and brace will be moved to the working area adjacent to the hopper/pump assembly.
- Two holes will be cut into each end on the top of the box. The operator will ensure that the holes breach the plastic liner on the inside of the box.
- The debris will be visually inspected to verify it matches the Material Profile.
- The nozzle of the grout pump will be inserted into one of the holes in the box and liner and a flowing cement grout will be slowly pumped into the box until the grout rises to with in 4 to 6 in. of the box top.
- The cement grout will then be allowed to set overnight. A second layer will then be placed on the first layer to "top-off" the container. Again, the box will be allowed to set overnight.
- Once set, the box will be taken to the landfill for disposal or placed into storage for later disposal when weather and scheduling permit.

For more information, see Overview 4.3.5 in Appendix A of this document.

4.3.6 Waste Repackaging

The ICDF Complex's policy is that waste being shipped off-Site will not be accepted for permanent storage at the ICDF Complex. However, there may be instances where it may be necessary to repackage the waste at the ICDF Complex. In this instance, wastes being shipped to an off-Site treatment, storage, disposal facility may require repackaging into containers that meet DOT shipping requirements. Waste may be removed from its original container and placed in an appropriate new container or may be "over-packed" into the new container. This work will be conducted in the decon building and may be performed in either the treatment area or decon bay.

4.3.7 Aqueous Waste Storage

As defined, tank and tank systems include aboveground tanks located in the SSA and ICDF storage area(s) (i.e., ICDF Tank Storage Area) and belowground tanks, including ICDF Complex sumps and oil/water separators that are components of the ICDF Complex. These tanks will contain aqueous waste destined for treatment and/or disposal in the ICDF evaporation pond. Only wastes generated by WAG 3 will be accepted for direct disposal into the evaporation pond. Tanks and tank systems will be managed to ensure they are compatible with the characteristics of the waste placed in them and to ensure that incompatible wastes are not placed in the same tank and/or tank system or in an unwashed tank and/or tank system that previously held an incompatible waste.

For those tank systems that do not have a leak detection system, an inspection schedule will be developed and followed. All deficiencies/problems resulting from inspections will be documented and communicated to the appropriate ICDF Complex facility manager. For more information, see Overview 4.3.7 in Appendix A of this document.

4.3.8 Waste Shuttle Requirements

As stated in Section 2 of the RAWP (DOE-ID 2003a), the routine daily movement of waste into the landfill can be accomplished through two basic mechanisms: dump trucks disposing directly into the landfill or roll-on/roll-off containers which will be placed in queuing areas awaiting disposition. Waste will be moved from the queuing area at the ICDF to the dump face where the waste will be off-loaded. Queued wastes may include bulk soils that are dumped at the work face, as well as containerized waste, PCB waste, asbestos, and monoliths. Specific activities include the following:

- The water truck will apply water to the haul road at the beginning of the operations shift as required.
- The appropriate truck (dependant on the waste form of staged waste) will proceed to the queuing area and load the waste containers for delivery to the disposal cell.
- Prior to loading the waste container, the driver will examine the area around the container for leakage or any other concerns.
- Waste Generator Services (WGS) or the driver (if WGS is not present) will verify the bar code on the container matches the OWTF and determine if special considerations exist for waste shipment.
- The driver then proceeds to the disposal cell and backs into position as directed by the off-loading coordinator at the dump face.
- The OWTF for the load is reviewed by the off-loading coordinator. If all is in order, the container is prepared for off-loading. If specialized equipment is required for off-loading, it will be positioned to minimize contamination.
- Once the truck has been off-loaded, a survey for radiological contamination is performed (Section 4.9.5.5).
- The location of the waste disposition is entered onto the OWTF by the off-loading coordinator and is given to the appropriate data entry person at the end of the shift for entry into the IWTS.
- The driver then proceeds to the full container section of the queuing area and begins the process over or returns to the dig site if a dump truck is used.

For more information, see Overview 4.3.8 in Appendix A of this document.

4.3.9 Decontamination

Dry decontamination activities, such as brushing, will be tried upon discovery of contamination. If these procedures are not effective, the equipment may be moved to the decon building and wet procedures will be used as necessary. Radiological and hazardous contaminants on waste transport vehicles, waste containers, and miscellaneous equipment will be removed as needed. A high-pressure-water sprayer will be used to wash the contaminated trucks, containers, and equipment, and, after verification of decontamination, they will return to normal use or be staged for future use. All trucks and equipment leaving the ICDF Complex will be verified to be in compliance with the Site radiological-free-release criteria. Equipment to be used again will be staged for future use at a suitable location. Water from the decontamination facility is drained through an oil/water separator to a pump station and then is pumped

directly to the evaporation pond. An alarm system will be installed to notify operators of a possible pump malfunction.

Decontamination activities may also occur at other locations such as the landfill pit, evaporation pond truck unloading area, or any one of the staging/storage areas. These activities are expected to be very infrequent. In each case, all waste generated would be tracked in IWTS and any free liquids contained and packaged.

4.3.10 QA Sampling of Treated Waste

Sampling to confirm the treatment process for each source of waste will be conducted in the manner described in the remainder of this section.

The waste stabilization process, as currently envisioned, will involve the batch treatment of individual soil boxes or containers at the ICDF Complex. As treatment progresses for a series of waste batches, the treated batches will be combined into a larger container (expected to be a 10-yd^3 roll-on/roll-off container) for handling prior to disposal. Composite samples representing approximately 20 yd^3 or two containers, whichever is less, will be generated through the collection and compositing of subsamples from each of the individual treatment batches that are combined into the larger containers. It is expected that five treatment batches will be combined into a larger container. However, the actual number of treatment batches may vary for each container.

The collection of representative composite samples from the containers will proceed in the following progression for the treatment campaign associated with each different source of waste:

1. For containers 1 through 10, five composite samples will be collected from containers 1-2, 3-4, 5-6, 7-8, and 9-10.

2. For containers 11 through 42, a composite sample will be collected from two randomly chosen containers out of every four containers (either the first two or the last two containers).

3. For containers 43 through completion of the treatment campaign, a composite sample will be collected from two consecutive containers randomly chosen from every 10 containers.

4. Finally, a composite sample will be collected from the last the two containers of each treatment campaign.

In application of the decision rules presented in Section 2.5, Decision Rule, of DOE-ID (2003g) the sampling results from each composite sample collected from a container will be considered to be only representative of the container sampled and all unsampled containers generated following the last sampled containers. An example of this approach would be that the sampling results from containers x and x+1 would be considered representative of containers x and x+1 as well as containers not sampled between the previous sampling event and the sampling of container x. Should the sampling results from a container indicate that the treated soils in that container meet the alternative LDR treatment standards for contaminated soil (as described in Decision Rules 1 or 2, Section 2.5 [DOE-ID 2003g]), then that container and all containers that sample represents would be considered to have met the alternative LDR standards. Should the sampling results from a container indicate that the treated wastes do not meet the treatment standards (Decision Rule 3, Section 2.5 DOE-ID [2003g]), then the waste in that container would be subject to retreatment, alternate treatment, or alternate disposal, and the unsampled containers that the failed container represents would be resampled as though the sampling campaign were starting again with container number 1. Thus, should containers x and x+1 fail the treatment standard, the

containers not sampled between the previous sampling event and the sampling of container x would each be sampled (and again subject to the decision rules). This would then be followed by randomly collecting a composite sample from two consecutive containers for every four containers for the next 32 containers similar to the sampling described in #2 above for containers 11-42. This would then be followed by the same sampling routine of collecting a random composite sample from two consecutive containers for every 10 containers for the remaining treatment campaign similar to #3 described above with the final two containers also being sampled. The frequency of waste sampling may be changed if deemed necessary due to unexpected changes in waste characterization. Alternate disposal may be at another facility or by approval as outlined in Section 2.2.1 of the ICDF Complex WAC (DOE-ID 2002e).

Finally, as each treatment campaign ends and waste soil from a new site or source is received at the ICDF Complex, a new waste treatment campaign will be considered to have started and the sampling progression described above will be restarted with the first container.

4.3.11 Use and Management of Containers

ICDF Complex users are required to utilize containers that are deemed acceptable in the appropriate WAC for the waste stream. Filled waste containers will also be inspected according to the appropriate inspection procedure.

4.4 Sampling Procedures

4.4.1 Verification Sampling

The verification requirements are described in detail in *ICDF Complex Waste Verification Sampling and Analysis Plan* (DOE-ID 2003d). The purpose of this plan is to provide the verification of untreated wastes destined for disposal in the ICDF landfill. The objective of waste verification is to confirm that key parameters in the waste do not exceed the limits of the Material Profile. Key parameters have been identified as those parameters that impact ICDF operations or limit acceptance of waste in the landfill, as defined by landfill WAC and/or operational limits. Depending on the media being disposed of, verification can include visual inspections, administrative controls, a review of associated documentation and calculations, or verification samples. Waste verification will be performed by ICDF Complex personnel and will be independent of the organization generating and characterizing the waste.

Final checks on waste placed in the ICDF will be performed as part of leachate QA sampling rather than through verification. Leachate QA sampling is addressed in the *ICDF Complex Operational and Monitoring Sampling and Analysis Plan* (DOE-ID 2003e).

4.4.2 Treatment Sampling Procedures

The following is the sequence of events that will occur after the stabilization process has been initiated. Facility Operations personnel will stage the waste for sampling.

1. Following treatment of the waste or treatability study sample, a sample is obtained for analysis.

2. For treatability study sampling, a simple grab sample is collected from the resulting treated waste.

3. For full-scale treatment sampling, a grab subsample is collected from each treatment batch that is to be combined in the larger containers, as described in Section 4.3.10. Once all subsamples have been collected from the combined batches, the subsamples will be composited through thorough mixing in a stainless steel bowl using only stainless steel mixing tools.

4. The composite stabilized waste sample material or grab sample from treatability studies is placed into bottles that are labeled with the corresponding sample identification numbers using the sample identifiers in Section 4.1. Sample material will meet the size requirements for TCLP analysis per SW-846 Method 1311 (capable of passing through a 9.5-mm standard sieve).

5. Depending on the radiological activity, material must be shipped to the appropriate laboratory.

Stabilized waste samples will be shipped as soon as possible to the analytical laboratory accompanied by a COC and appropriate shipping paperwork. The requester will coordinate the procurement of required packaging, if a cooler will not suffice for the levels of radioactivity anticipated (if activity exceeds that for limited-quantity shipments). The laboratory will be contacted for notification of delivery. Upon receipt of the sample, the laboratory will check for damage to the sample container and check for discrepancies between the COC and the sample label information. The person receiving the laboratory sample will then sign the COC indicating receipt and transfer of custody of the samples.

4.5 Discrepancy Resolution

In the event a discrepancy is discovered by ICDF Complex personnel, some form of corrective measures will be initiated. The level of action taken is related to the type and level of the discrepancy. These measures can range from field changes caused by unforeseen field conditions to DOE reportable incidents.

Corrective actions will be developed and implemented which address deficiencies or problems that are identified during facility operation. Action levels and time frames will be based on the potential threat to operational or environmental safety that the discrepancy poses (e.g., a procedure deficiency which could result in a release to the environment would be corrected immediately, while an administrative issue could be corrected over a reporting period). More detailed descriptions of action plans associated with various operational activities are discussed in this plan as follows:

- Action leakage rate discrepancies – Section 4
- Inspection discrepancies – Section 8
- Monitoring discrepancies – Section 3
- Waste tracking discrepancies – Section 4 and PLN-914
- Reporting and emergency response discrepancies – Section 9.

4.6 Evaporation Pond Management

A number of operational activities will be routinely conducted at the evaporation pond cells. The following sections discuss expected operations. Additional detail for each of the activities is in Appendix A of this document. Only liquid wastes generated by WAG 3 may be discharged into the evaporation ponds through two methods: (a) tank/truck unloading via the truck unloading station and (b) pumped directly from the Leachate Collection Recovery System, the leak detection chambers, or the decon building pump station.

4.6.1 Tank Off-Loading

The evaporation pond has been equipped with an off-loading station which allows for discharge from either a truck or a container. The station is on the north end of the ponds. The truck will access the

off-loading station and discharge through a hose into the station. The waste will pass through the evaporation pond crest pad building and then into the evaporation pond. The unloading facility is designed to accommodate a variety of containers. Regardless of container size, there will be two primary methods for unloading–gravity flow or pumping. For more information, see Overview 4.6.1 in Appendix A of this document.

The station can also be utilized for loading tanks from the evaporation ponds. This is accomplished through a transfer pump and a specific valve alignment in the evaporation pond crest pad building.

4.6.2 Aqueous Waste from Decon/Treatment Facility

The transfer of aqueous liquid wastes generated at the decon building to the ICDF Complex evaporation ponds will be through the pump station to the evaporation pond crest pad building.

Aqueous wastes generated at the decon building include those from

- Soil stabilization processing and equipment cleaning
- Debris treatment processing and equipment cleaning
- Equipment decontamination and cleaning
- Other aqueous wastes, such as WAG 3 well purge water, that may contain solids or an oil fraction.

Aqueous wastes, regardless of source in the decontamination building, will pass through a floor drain/piping system to an oil/water separator and be collected in the pump station sump. Two "grinder" wastewater pumps will be located in the pump station sump. Each unit will be controlled by an ultrasonic monitor located in the sump. Double-walled pipe is installed to prevent leaks into the environment. For more information, see Overview 4.6.2 in Appendix A of this document.

4.6.3 Liquid Waste Transfer Between Evaporation Pond Cells

Transfer of liquids from one evaporation pond cell to the other may occur for a wide variety of reasons, such as

- Nonroutine maintenance of the cell liner
- Sediment removal
- Balancing the level in the cells
- Reducing the risk of wave overtopping
- Empty a cell due to a leak that cannot be located.

Transfers will be accomplished by immersing a pump, hose, and power cable assembly with a boom truck. Discharge may be routed through the evaporation pond crest pad building to utilize a flow meter/totalizer or by a hose placed in the other cell and the transfer volume determined by pond level measurement. For more information, see Overview 4.6.3 in Appendix A of this document.

4.6.4 Evaporation Pond Cell Wash Down

Preventing the airborne release of contaminants from the evaporation pond cell will be accomplished by washing down any sediment on the exposed portions of the liner on a regular basis as determined by evaporation rates. This procedure may also be implemented to maintain evaporation pond cell levels during times of high evaporation rates.

Temporary piping, hoses, nozzles, and sprinklers may be utilized. The wash-down technique, and amount of water used, will vary depending upon evaporation rates and the amount of aqueous waste being introduced to the cells.

The volume of water added to the cells will be displayed on a flow meter/totalizer that can be read at the administration trailer or the evaporation pond crest pad building. For more information, see Overview 4.6.4 in Appendix A of this document.

4.6.5 Evaporation Pond Low-Point Sump Cleaning

Sediments will accumulate in the low-point sump of each cell over time. The sediment is expected to be primarily wind-blown sand and dust. As a general guidance, when the sediment layer approaches 12 in. in depth, it will be sampled, removed, and packaged for final disposition. The 12-in. depth results in about 10 to 15 yd^3 of material that is handled during cleanout. A combination of operating knowledge and visual operation will be used to determine the approximately 12-in. depth. All waste generated from sediment removal will be tracked in IWTS. For more information, see Overview 4.6.5 in Appendix A of this document.

4.6.6 Evaporation Pond Cell Level Control

The inventory of each evaporation pond cell will be tracked through the use of flow totalizers from each discharge location, i.e., the detection chambers, decon building, truck unloading station, etc. This information will be used to monitor the performance of the cells. This information will also be utilized to manage cell levels to meet freeboard requirements. The liner wash-down equipment will be used for the addition of make-up water.

Following the completion of cell construction, a depth indicator will be installed in each cell to allow accurate measurement of the fluid level. The as-built drawings will be used to calculate the cell volume that corresponds to particular depths. For more information, see Overview 4.6.6 in Appendix A of this document.

4.6.7 Evaporation Pond Leak Detection Chamber Monitoring and Liquid Transfer

The evaporation pond leak detection chamber monitoring and liquid transfer will be performed to ensure that the following elements are implemented:

- Monitor the two leak detection chambers of the evaporation pond cells and remove measurable amounts of liquid as necessary
- Monitor, record, and archive liquid levels in the leak detection chambers and the volumes transferred from each chamber to the evaporation pond at least once each week
- Calculate, based on the weekly leak detection chamber volumes pumped, a leakage rate and compare that to the ALR limit for the evaporation pond cell.

The leak detection chamber transfer system for each sump is designed to operate in an automatic mode. Manual operation of both pumps is available by a hand switch. Valve alignment will not differ with the exception of selecting either the west or east evaporation pond as the pump discharge destination.

The instrumentation and control system will be programmed to archive the leak detection chamber level and volume of liquid pumped from each chamber on a weekly basis. Additional details of the evaporation pond leak detection chamber system operation are provided Overview 4.6.7 in Appendix A.

4.7 ICDF Complex Instrumentation and Control System

The ICDF Complex utilizes a control and data acquisition system for leak detection, sump level monitoring, pump control, flow recording, alarming (HVAC and CAMs), and temperature monitoring for freeze protection. The system has local indication and control stations. In addition, the system includes a centralized control station which performs data archiving and indication. The control system is self-contained except for a link into the main INTEC facility. The system supplies information required to meet regulatory requirements and information to efficiently operate and maintain the Complex.

The ICDF Complex is comprised of four "buildings" from the control and data acquisition viewpoint: the ICDF evaporation pond, landfill crest pad, decon building, and admin trailer.

The major components of the ICDF Complex instrumentation and control (I&C) system includes field instruments, discrete and analog input/output modules, programmable logic controllers (PLCs), human-machine interfaces (HMIs), and the communications to connect each of these components. The field instrumentation includes sensors and transmitters, which collect and communicate data, and motor starters, which allow physical actions to be taken based on this data. The input/output modules provide an interface between the field instrumentation and the PLCs. This interface allows data received from the field instrumentation to be assigned to variables (inputs) and provides a path for variables from the logic to initiate actions in the field (outputs). The PLCs utilize the data inputs and programmed control logic to monitor conditions in the field and initiate appropriate actions in the form of alarms or outputs to field devices. The HMIs consist of local operator interfaces at each PLC location and a central control station located in the administration trailer, which receives data from all of the PLCs in the ICDF Complex. All of this equipment is connected through a communication network. In order to get alarm information into the main INTEC facility, a pair of modems is connected via a dedicated phone line. The modems are configured to monitor communications and, if communications are lost between the ICDF Complex and the main INTEC facility, to generate an alarm in the main INTEC facility.

The ICDF Complex control system monitors the operations of the decon building, the conditions of the evaporation pond, and the conditions of the landfill. Most of the control system functions will be the monitoring of levels, flows, and alarms within the ICDF Complex. This allows the ICDF operators to account for any normal or abnormal event in the operation of the Complex. The operators can check the status of the operating conditions at their convenience. Should an alarm condition occur, the controls will immediately notify the operators who initiate the appropriate corrective actions. Alarm conditions are also transmitted to the high-level waste operations Distributed Control System (DCS) in INTEC. This DCS displays in a continuously occupied control room. This is necessary since the admin trailer will not be occupied continuously. In addition to monitoring, many of the operating conditions of the Complex will be archived, such as monitoring data on levels and flows.

Further information regarding the I&C system is contained in Drawings IN-201 and IN-202, the process and instrumentation diagrams for the ICDF Complex landfill and evaporation ponds.

4.8 Leachate Management

This subsection discusses the monitoring and transfer, to the evaporation pond, of landfill leachate.

4.8.1 Landfill Leachate Monitoring and Transfer to Evaporation Pond

Landfill leachate monitoring and transfer to the evaporation pond are being performed to ensure that the following elements are implemented:

- The hydraulic head over the primary liner of the landfill does not exceed 30 cm (1 ft) by automatically transferring the leachate from the leachate sump
- The sumps are monitored and that leachate is transferred from the leachate sump once each week, as necessary during the active life and closure period and that this information is recorded and archived
- The leachate volumes are assessed at least once each week during the active life and closure period and that this information is recorded and archived
- Calculate, based on the weekly leak detection chamber volumes pumped, a leakage rate and compare that to the ALR limit for the landfill (immediately notify the facility manager and implement the Landfill Action Leakage Response Plan if the ALR has been exceeded).

The transfer system for each sump is designed to operate in an automatic mode and manual operation is also an option. A level transducer will control the starting and stopping of each pump. Individual flow monitor/totalizers will measure the flow and the PLC will monitor and record the data. Sample ports are installed on each line should a leachate sample be required. The leachate may be directed to either one of the evaporation ponds through the positioning of two manual valves in the evaporation ponds crest pad building.

Each of the leachate pumps (with flexible discharge pipe, level transducer cable, and power cable) is placed in its respective sump by lowering it on a permanent cable through a riser pipe from the landfill evaporation pond crest pad building. Additional details of the leachate system are provided in Overview 4.8.1 in Appendix A of this document.

4.9 Landfill Operations

This section addresses the landfill operations at the ICDF Complex. Specific requirements and implementation steps are identified for the disposal of waste in the landfill, as well as the support activities such as maintenance of the facility (haul roads, etc.), dust control, radiological boundary control, radiological survey, and decontamination. The following narrative gives a summary description of the operations of the landfill at the ICDF Complex. The requirement overviews in Appendix A provide a more detailed description of the associated requirements and activities.

4.9.1 Haul Road Management

A clean haul road will provide access to the landfill dumping peninsula, for either roll-on/roll-off trucks or dump trucks with direct access into the landfill. As the dumping peninsula moves from the initial location in the landfill, the haul road will be extended to access the new dump peninsula. The extended haul road and new peninsula consists of clean, compacted granular fill from the permanent stockpile for the ICDF Complex. The haul road will be maintained with a width of 30 ft and a maximum

slope of 10%. The haul road will be graded and maintained during landfill operations. Traffic control signage will be posted on all haul roads.

The dump peninsula is moved throughout the landfill during operations. Construction of the peninsula is similar to that of the haul road. The dimensions of the peninsula will be approximately 100 × 50 ft and will allow for access to different dump faces dependent on wind direction. For more information, see Overview 4.9.1 in Appendix A of this document.

4.9.2 Traffic Control

Traffic control will be implemented by placing and maintaining signage (i.e., stop, yield, and directional) on the haul roads, at the dump face peninsula, and in the queuing area at the ICDF Complex. The signage is to keep the flow of vehicles at the ICDF moving in a safe and efficient manner. Barricades may also be used to control traffic when necessary.

Traffic signage will be modified each time changes are made to the haul road system, peninsula, or other roads within the complex. Also, if changes are identified that will contribute to more efficient operation, supporting signage changes will be made. The signs will be portable and free-standing. Personnel driving vehicles into the ICDF Complex are expected to read and follow signs and other official posted directions when entering the complex or crossing a barricade.

4.9.3 Dust/Contamination Control

Dust/contamination control will be implemented as needed to control wind dispersal of dust and contaminants (e.g., IDAPA 58.01.01.585 and IDAPA 58.01.01.586) from the landfill and active areas (access roads) during operations and off-hours through the use of a variety of control mechanisms. Specific activities include the following:

- Before each operational day begins in the ICDF landfill, water may be applied to landfill access roads and the traffic areas in the dumping peninsula, including the dump face, as a dust suppressant.

- As needed during the operational day, water or dust suppressant will be applied to access roads, landfill traffic areas, the dump face area, and the active waste disposal cells to control emissions.

- A soil fixative will be applied, as determined by the RCT in control of the operation, to all disturbed areas of the waste surface and to the disturbed areas of the dump peninsula and landfill access roads to control dust. An overview (4.9.3a, Soil Fixative Application) is presented in Appendix A that describes the mixing and application of soil fixative for daily and seasonal applications.

- ICDF personnel will apply water to the waste being compacted and the waste being dumped at the dump face. Water will be supplied using a hose connection to the hose bib on the north side of the landfill, via temporary water lines, or by water truck. The purpose for the addition of water to the waste upon dumping is to control dust and minimize airborne emissions. The application of water aids waste compaction. Field operations personnel will ensure that water is not over-applied to prevent ponding of water in the landfill. For more information, see Overviews 4.9.3 and 4.9.3a in Appendix A of this document.

4.9.4 Radiation Boundary Control

Radiation boundary control will maintain the control boundary that separates the radiological controlled area from the clean area within the landfill, around the evaporation ponds, and at the decontamination and queuing areas. The main activities include the following:

- Maintain barriers around the active disposal area in the ICDF landfill; support the location of the barriers with radiological surveys and adjust the boundary, as needed

- In similar fashion, routinely survey the evaporation pond areas and the queuing area, evaporation pond crest pad buildings, and decon building and establish barriers, where needed

- Develop and maintain an ICDF Complex map to be displayed at the admin trailer and other places, as required, showing the locations of controlled areas.

4.9.5 Landfill Waste Placement

Waste containers will be placed in the landfill in accordance with Overview 4.9.5.1, "Landfill Waste Off-loading/Placement Requirements" in Appendix A of this document. Placement of waste within the ICDF landfill will be subject to the following constraints:

- The waste needs to reach the top of the north end of the landfill as soon as possible to allow access to the landfill from an access road on the north side.

- Access to the landfill floor is to be maintained.

- The maximum drop from the dump peninsula will be 6 ft to preclude the need for fall protection equipment and procedures.

- The dump peninsula should keep three dumping direction options to accommodate changing wind directions.

- An approximate 100-ft-wide level lift will be completed adjacent to side slopes before waste is placed further up on the sloped area of the landfill. Doing so provides a buttressing effect to the side-slope liner as wastes build from the bottom to the top of the facility.

- Material size and type limitations placed within 5 ft of the operations layer are necessary for liner protection (see Overview 4.9.5.1).

4.9.5.1 Waste Off-loading/Placement. The majority of the waste shipments to be received at the ICDF Complex will be bulk soils. However, a small percentage will be made up of the other waste types. To accommodate the various waste types, arrangements will be made to have necessary equipment at the landfill when the shipments are received for off-loading. Some waste may need to be staged in the cell awaiting the proper placement criteria. If this occurs, waste may not reside in the cell without being placed for longer than 7 days.

The scheduled shipments for the week will be reviewed in advance to identify unique equipment needs for the off-loading of specific waste shipments.

For bulk-waste soil, the following arrangements will be made:

- Packaging requirements for bulk-waste soils require a lined container to facilitate a clean off-loading at the dump face by releasing the tarp, viewing the load with a mirror, opening the rear gate, raising the container slightly, rolling the container rearward over the edge and raising the container until the waste slides out.

- If waste is shipped in a fixed bed dump truck, the truck is backed to the dump face, the rear gate is unlatched, and the bed raised.

- The waste will be spread in 12-in. loose lifts, no further than 100 ft from the dump face, and the location will be noted on the OWTF. This information will also be put into IWTS.

- Throughout the process, water will be applied as necessary to control dust and aid compaction.

For containerized soil waste, the following arrangements will be made:

- Containers will be off-loaded and placed either in the designated disposal location or in an interim area prior to being placed in the appropriate landfill grid after off-loading has been completed. In the later case, final placement will be completed as soon as possible (generally within 48 hours of off-load) and soil waste will be placed over the containers and compacted.

- When placed into the landfill, the containers will be located on waste at least 5 ft above the top of the original operations layer and spaced as specified in EDF-ER-286.

- The grid location of the container will be recorded on the OWTF and entered into IWTS.

- The containers will be crushed by the bulldozer, spread into a lift, and covered with soil waste or clean soil prior to compaction.

- Throughout the process, water will be applied as necessary to control dust and aid compaction.

For steel containers and drums, the following arrangements will be made:

- Steel containers and drums will be off-loaded in either the designated disposal location or in an interim area prior to being placed in the appropriate landfill grid.

- Steel containers or drums will be located on waste at least 5 ft above the top of the original operations layer and spaced as specified.

- The steel containers and drums are required by the WAC to be full and will be covered by waste soils and the soils compacted.

- Throughout the process, water will be applied as necessary to control dust and aid compaction.

For large debris, including steel and concrete beams and monoliths, pipes, and culverts, the following arrangements will be made:

Large Debris:

- This debris will be off-loaded in the designated disposal location or in an interim area prior to being placed in the appropriate landfill grid.

- Debris will be located on waste at least 5 ft above the top of the original operations layer and spaced as specified in EDF-ER-286.

- The grid location of the debris will be recorded on the OWTF and in IWTS.

- The beams and monoliths will be covered by waste soils and the soils compacted.
- Throughout the process, water will be applied as necessary to control dust and aid compaction.

For large and small concrete and building rubble, the following arrangements will be made:

- Rubble will be off-loaded in the appropriate grid location or off-loaded to an interim area and then moved to the appropriate landfill grid. Soil waste will be placed over the rubble and compacted.
- Rubble will be spaced so that soil waste can be placed between the rubble pieces to ensure appropriate compaction. The debris will be covered with soil waste and soil will be compacted.
- Throughout the process, water will be applied as necessary to control dust and aid compaction.

For asbestos-containing waste, the following arrangements will be made:

- Asbestos-containing material (ACM) will only be accepted for ICDF landfill disposal if the material is radiologically contaminated and/or contains hazardous waste constituents and is packaged according to the ICDF landfill WAC. Equipment will be utilized as required to off-load the ACM. Delivery to the ICDF will be prearranged in order to complete prompt delivery and disposal.
- ACM will be placed in a 2-ft-deep formed trench consisting of two berms with a trench between. Previously placed waste will not be disturbed. The asbestos waste will be placed in the trench, covered with 6 in. of waste soil or a dust suppression agent, and compacted. This will be completed at the end of the operating day, or within a 24-hour period while the site is in continuous operation, as required by 40 CFR 61.150.
- The grid location of the ACM will be recorded on the OWTF and in IWTS.

4.9.5.2 PCB Management. The ICDF landfill has been designed to dispose of PCB-contaminated material < 500 ppm (DOE-ID 2002a). Operational requirements for storage, disposal, and recordkeeping for PCB waste are presented in this section. As with all waste, a Material Profile will be required from the ICDF Complex user. If decontamination practices were used, these must be documented on the Material Profile including a demonstration that the waste stream is below the 500 ppm WAC limit.

A PCB-compliant waste storage area is located near the decon building as shown on Figure 1-2. PCB waste will be stored at this location until the landfill schedule allows for disposal or, if necessary, an alternative disposition pathway has been determined. It is possible that PCB waste received at the ICDF will be radioactive as well as PCB-contaminated. If the waste exceeds the acceptable radioactive or PCB concentrations presented in the WAC, alternative disposal methods will be investigated. Disposition of PCB-contaminated waste will be tracked using IWTS.

4.9.5.3 Waste Compaction and Inspection. Waste compaction is a crucial function in the operation of the landfill. Compaction testing will be conducted at intervals of 2,500 yd^3 disposed. The compaction procedure to achieve the equivalence of 90% of ASTM D698 will be developed from a matrix of tests conducted on a range of expected soil types. These tests will initially be conducted on clean soils out of the landfill area using equipment anticipated for waste placement and compaction. Three general soil types will be tested: fine grained clayey silts (such as the Old Alluvium), alluvial sands and gravels, and topsoil (near-surface silty sands). For each soil type, a 12-in.-thick test lift will be laid down, a D-9 or similar dozer will be driven over the test lift, and compaction will be tested by several

methods. The procedure will be repeated until the 90% compaction standard or greater is attained. Using the results from these tests, a matrix will be developed that provides the number of dozer passes required for each general soil type. The result of the compaction of different methods may justify the use of the Humbolt GeoGauge as an alternative verification method. The Agencies will be supplied the results of the testing for approval of the Humbolt GeoGauge.

As part of the characterization process, the generators will classify their waste into one of the three expected soil types. This will be used to determine the required passes to reach the desired compaction. Compaction tasks include the following:

- Soil waste is off-loaded at the dump face. The dump face drop from the peninsula floor to the active waste floor will be maintained at less than 6 ft.

- Debris and packaged waste will be placed in the landfill and covered with soil waste prior to compaction. Routine operations may involve holding the waste in an interim area in the landfill until conditions allow for correct compaction around the debris. Waste may not be staged in the landfill longer than 7 days waiting for placement.

- The dozer will move the waste away from the dump face and spread across the working grid(s). Water will be added as needed to control dust and aid in compaction.

- The dozer operator will base the number of passes required to achieve compaction on the soil type provided by the generator, as discussed above.

- Containerized waste or monoliths will be placed and surrounded by soil waste and compacted by the same techniques.

- After approximately 2,500 yd^3 of waste has been placed, a compaction test will be performed to determine if the compaction procedure is reaching 90% of ASTM D698 (Standard Test Method). A nuclear density gage (using procedures identified in ASTM D-2922) or a Humboldt GeoGauge (using ASTM D-6758) following Agency approval will be used to determine in-place compaction.

- Asbestos waste will be covered with a minimum of 6 in. of soil or a dust suppressant agent and compacted as specified.

- The compaction test results will be entered into the operations log. If remedial action is required based on the test results, it will be implemented on the following operations shift.

  For more information, see Overviews 4.9.5.3 and 4.9.5.3a in Appendix A of this document.

4.9.5.4 In-Cell Grouting. In the case of a waste item that poses difficulty for compaction, void space, or danger to equipment and personnel, in-cell grouting may be performed. Addition information regarding in-cell grouting may be found in Overview 4.9.5.1 in Appendix A of this document.

4.9.5.5 Radiological Survey Requirements. All vehicles that enter the landfill will be surveyed prior to leaving. Following the completion of the off-loading of waste from the vehicle, the container will be lowered and the truck moved forward away from the dump face. The RCT will perform a radiological survey of the tailgate area, the rear tires, and the rear of the vehicle. If background is high, the vehicle will be moved to a lower background area where a radiological survey can be performed.

If no contamination is detected, the vehicle will be released and allowed to return to the ICDF Complex queuing area to off-load the empty container or leave the facility. If contamination is detected, the vehicle will be decontaminated in place, moved to a designated decon area in the landfill or moved to the decon building where a more specific survey will be performed to identify the area of the contamination. Decon procedures will be implemented to remove the contamination. The results of the radiological survey and decon process shall be recorded. For more information, see Overview 4.9.5.5 in Appendix A of this document.

4.9.5.6 Decontamination. Equipment that has been determined to be externally contaminated during the radiological survey will be required to be deconned prior to exiting the landfill.

The contaminated equipment will be moved to a designated decontamination area in the landfill. The equipment will be decontaminated with the assistance of an RCT. The initial decontamination effort will invoke dry techniques (i.e., sweeping or brushing). More aggressive techniques (i.e., wet techniques including water and/or steam) will be used, as required, to remove the contamination and obtain a clean survey that will allow for the release of equipment. If wet techniques are required in the decontamination effort, the equipment will be placed on a portable liner and the liquids will be collected and disposed of as waste. If decontamination efforts fail in the landfill, the equipment will be placed on a lowboy trailer and moved to the decon building.

4.10 Start-up Testing

Start-up testing will be completed throughout the ICDF Complex prior to operation. The following sections discuss the start-up tests for their respective equipment.

4.10.1 Pump Tests

The pump testing will be a combination of component testing completed during component construction and installation testing. The objective of the testing is to verify that the pumps and associated controls operate as designed. Included in the pump tests are all pumps that (a) remove water and waste from the various ICDF Complex sumps, (b) transfer leachate from the landfill to the evaporation pond, and (c) transfer water between ponds. Specific pumps to be tested are

- East and west evaporation pond leak detection chamber pumps
- Evaporation pond transfer pump
- Combined sump pump
- Landfill leachate collection and recovery high-volume and low-volume pumps
- Landfill leak detection and recovery pump
- Landfill secondary leak detection and recovery pump
- Landfill evaporation pond crest pad building sump pump
- Pump station grinder pumps
- Lift station grinder pumps.

The system operation (SO) tests will verify that the design flow rate is delivered at the appropriate head. Also, the control system (automatic and/or manual) will be demonstrated to be consistent with the design.

4.10.2 Pump Deployment and Retrieval System

The two leachate and four leak detection chamber pumps will be lowered into place through a 12- or 18-in.-diameter riser pipe. As part of the initial in-place pump testing, each pump will be lowered in to position using a cable system to verify the operability of the system. For more information, see Overview 4.10.2 in Appendix A of this document.

4.10.3 Level Detection Systems Check

The level detection systems checkout tests will address all level devices used at the ICDF Complex. Level detection systems exist in all sumps, each of the evaporation pond cell leak detection chambers, and the leachate collection sump and leak detection system sump in the ICDF landfill.

4.10.4 Tank Integrity

The tank integrity testing will address all of the sumps at the ICDF except those exempted by 40 CFR 264.1 (g). Each sump will be checked for leak tightness by adding a measurable amount of water to each sump and observing the water level for a specified period of time. If a sump is found to not be leak-tight, repairs will be made to correct the problem before final covering and putting the unit in service. They are for emergency use only (e.g., leak detection sumps). These sumps will be inspected on a regular interval, and, if liquids are detected, removal of the liquid will be a priority of the ICDF operations. All liquid must be removed within a 72-hour period.

The sumps to be tested include the following:

- A tank system composed of the concrete P-trap (in the decon building), oil/water separator and the pump station
- Combined sump (west of the evaporation pond crest pad building).

4.10.5 Instrumentation Checkout

Instruments at the ICDF Complex will be checked for continuity during installation. Proper operation will be verified during the operational checkout. Instruments providing analog readings will be calibrated as part of the installation process. Instruments will be calibrated in a calibration lab when possible and in situ when required.

4.10.6 Set-Point Determination for Pump Operation

These start-up tests will determine the set points for the various pumps at the ICDF Complex. Each pump and level detection system will be subjected to an integrated test to verify and establish the actual actuation levels for the pumps.

4.10.7 Life Safety Systems and Monitoring Equipment

Prior to facility startup, life safety systems, such as fire safety equipment, CAMs, etc., will be checked for operation.

4.11 ICDF Complex Access

This subsection discusses the requirements for ICDF Complex access.

4.11.1 ICDF Complex Access

The ICDF Complex is considered a Property Protection Area. It is completely surrounded by a fence, with gates and other entrances designed to control entry. Normal employee access to the ICDF Complex will be through the administration area and the north gate. ICDF Complex authorized employees have unrestricted access to enter and leave ICDF Complex areas, provided they have current and appropriate training, and a DOE-ID-issued INEEL badge as required for their particular work activities.

ICDF Complex employees are required to wear badges and dosimetry, as required by the Job Safety Analysis (JSA)/RWP, at all times, in plain view, above the waist and below the neckline, unless health and safety considerations prohibit. Personnel who forget their badge must show a picture identification (ID) to security personnel to obtain a temporary badge denoting proper access authorization. If an employee does not have a picture ID, the employee's manager or designee can be contacted for positive employee identification.

All hand-carried articles brought into the ICDF Complex are required to have identification tags that list, at a minimum, the owner's name, work organization, and work phone number.

ICDF Complex access points will be open during normal business hours and closed at the end of the business day. The administration trailer, the entrance security gate, and other gates as appropriate (e.g., evaporation pond gate) will be locked/secured at the close of normal working hours. Keys to individual trailers, gates, file cabinets, etc., will be issued to ICDF Complex employees on an as-needed basis. All keys will be controlled through an established key control program. For more information, see Overview 4.11 in Appendix A of this document.

4.11.2 Visitor Access Requirements

Visitors to the ICDF Complex are required to be on official business. Visitor access to the ICDF Complex will be through the administration area. Visitors are required to obtain a visitor's badge and sign both the visitor log (Form 473.01, Visitor Traffic Log) at the INTEC guardhouse and the visitor log posted at the appropriate ICDF access control point(s). Visitors will be briefed on the ICDF Complex health and safety issues prior to leaving the administration area.

Visitors are required to wear badges and dosimetry, as appropriate, at all times, in plain view, above the waist and below the neckline. Visitors will be checked for the appropriate training and dosimetry as required for the areas to be entered. Signs and barriers will be used to identify and control access to CERCLA work zones, construction areas, and radiological control areas. Visitors who have a badge but not the appropriate need to enter, proof of training, and dosimetry will be allowed to enter the uncontrolled areas of the site (e.g., the administration area) but will not be allowed within the posted exclusion zones. Visitors who enter areas other than uncontrolled areas of the site require an escort. ICDF Complex personnel who have completed the required training can escort visitors. Subcontractor personnel who have completed escort and the required CERCLA training, and have special approval by INEEL Physical Security, are allowed to escort other subcontractor personnel or visitors.

All hand-carried articles brought into the ICDF Complex are required to have identification tags that list, at a minimum, the owner's name, work organization, and work phone number.

Periodic inspections will be performed on packages, boxes, briefcases, backpacks, and similar articles carried by or in the possession of visitors when entering or exiting the ICDF Complex. Routine inspections on these items are not planned as part of ICDF Complex operations. Failure to comply with a random inspection will result in denial of access. Prohibited items identified during an inspection will be confiscated. Prohibited items include, but are not limited to, firearms, ammunition, alcoholic beverages, illicit drugs, explosives, wiretapping or eavesdropping devices, or any dangerous or potentially dangerous instruments or materials likely to cause substantial injury to persons, property, or animals. Site security will be contacted in these instances. Investigating and reporting of security incidents will be performed in accordance with INEEL procedures and guidelines.

4.11.3 Perimeter Control and Inspection Requirements

The perimeter of the ICDF Complex is surrounded by a fence, with gates and other entrances designed to control entry. Signs reading "Danger-Unauthorized Personnel Keep Out" will be posted at entrances to the ICDF Complex, the landfill, and the evaporation pond. All signs will be posted in English, will be positioned so they can be seen from all approaches, and will be sized so they can be read from a distance of 25 ft. Signs and barriers will be used to identify and control access to CERCLA work zones, construction areas, and radiological control areas.

A monthly inspection of the perimeter of the ICDF Complex fencing will be performed to ensure the fence is intact and to determine the need to remove accumulated debris. The perimeter inspection will also include a verification of the following:

- Normally used gates (e.g., the evaporation pond and ICDF Complex entry gates) are operable and capable of being locked and locks are present/operable.
- Normally locked gates and associated locks are operable and remain locked.
- Required signs reading "Danger-Unauthorized Personnel Keep Out" are posted at the appropriate locations and can be read from a distance of 25 ft.

4.12 Emergency Response and Alarm Operation

Responses to a number of potential emergency/alarm situations that may occur at the ICDF are listed below. Additional details may be found in Appendix A of this document.

4.12.1 Loss of Utilities

Loss of utilities includes loss of raw water, electrical power, potable water, or fire water. These are discussed in more detail below:

- Loss of raw water—Processing operations in all locations (decon building, landfill, evaporation pond cells) would be either restricted or suspended. An ICDF Complex water truck with a spray nozzle may be used to spray any soil in the landfill that requires water for compaction or dust control. The water truck could also be used to complete liner wash-down in the evaporation pond cells.
- Loss of electrical power—Decon building waste stabilization operations, if being conducted, would stop immediately. All liquid pumping operations would stop. Receptacles for a portable generator are available in each evaporation pond crest pad building to provide power to the leachate and

other sump pumps in the event of an extended outage. A 15-min uninterruptible power supply will be available for the I&C system.

- Loss of potable water—The admin trailer and change room area of the decon building have potable water. An impairment of the system would require placement of drinking water containers and the use of INTEC restroom and personnel shower facilities until potable water service was restored. The potable water system is from INTEC and does have a back-up diesel power generator.

- Loss of fire water—The administration trailer and decon building have wet pipe fire sprinkler systems. There is a fire hydrant at the landfill and evaporation pond crest pad buildings but no sprinkler systems in the buildings. An impairment of the fire water system may require a "fire watch" (to be determined by the INTEC fire protection engineer) be established until the system was restored. The fire water system supply is from INTEC and does have back-up diesel-powered pumps.

4.12.2 Abnormal Facility Conditions

Abnormal facility conditions include earthquakes, wildland fire, extreme weather, spill/leak response, fire within the ICDF Complex, and plant evacuation/take cover. These are discussed in more detail below:

- Earthquake—Stop all operations work and follow instructions from the Emergency Communication System (ECS) from INTEC. Reentry into processing facilities will be made only after proper management authorizations and radiological surveys.

- Wildland fire— In the case of threat from a wildland fire, or smoke from a fire, follow instructions from the INTEC ECS. This may be a "TAKE COVER" instruction or a facility evacuation order from the INEEL Fire Department.

- Extreme weather—A "TAKE COVER" or evacuation order may be given over the ECS system in response to high winds, thunderstorm, heavy rain, hail, or snow.

- Spill/leak response—Actions will be governed by the ICDF Complex Emergency Response Plan. Instructions to personnel will be relayed through the ECS.

- Fire within the ICDF Complex—Fire alarm pull boxes and other sensors are located in the admin trailer, decon building, and evaporation pond crest pad buildings. Personnel response instructions will be given through the ECS.

- Plant evacuation/take cover—These events will be announced over the ECS. Other than the event discussed above, this could be the result of an event at a neighboring facility.

4.12.3 ICDF-Specific Abnormalities

Abnormalities specific to the ICDF could include a worker falling into an evaporation pond cell, the liner leaking, and a leaking tank/sump. These are discussed in more detail below:

- Worker falling into an evaporation pond cell—Notify the INEEL Fire Department for rescue assistance. Utilize available rescue equipment as covered by training.

- Evaporation pond liner leakage—Notify ICDF Complex management. Stop liquid additions to the leaking cell. Initiate transfer of the inventory of the leaking cell the other cell.

- Landfill liner leakage—Notify ICDF Complex management. Stop waste placement in the leaking cell. Initiate investigation into the location and cause of the leak.

- Tank/sump leakage—Notify ICDF Complex management. Remove liquid from tank or sump and conduct repair.

4.12.4 Landfill Leachate Transfer to a Truck

This operation would be used in an emergency situation if the evaporation pond cells were not available to accept leachate. Performance of this procedure would allow the ICDF Complex to continue to meet regulatory requirements. The specific relevant requirement is to prevent the hydraulic head over the primary liner of the landfill from exceeding 30 cm (1 ft).

Leachate would be transferred via the manual control of the Leachate Collection Recovery System pump through the evaporation pond crest pad building to the CPP-2706 truck loading/unloading station. For more information, see Overview 4.12.4 in Appendix A of this document.

4.12.5 Landfill Storm Water Sump Pumping

If needed, remove accumulated clean storm water/snow melt from the unlined surface sump in the southwest corner of the landfill. Temporary piping and portable pumping equipment will be used to pump water that is isolated from waste areas from the surface sump to a run-off ditch outside of the landfill. Should sampling of the water in the unlined sump show contamination, the contaminated storm water will be pumped into portable tanks and transferred to the evaporation pond cells. For more information, see Overview 4.12.5 in Appendix A of this document.

4.12.6 Landfill Action Leakage Rate Response Plan

Should the landfill ALR be exceeded, the landfill ALR response plan will be developed and implemented. This plan will comply with the provisions of 40 CFR 264.304(a)-(c) and will include, but not be limited to, the following activities:

- Calculation of the daily leakage rate for the landfill leak detection system

- Schedule of Agency notifications

- Assessments for size, location, and cause of the leak

- Assessments for the impact of the leak

- Short-term corrective actions

- Long-term corrective actions.

Section 9 and Overview 4.12.6 in Appendix A of this document present additional information concerning response actions and necessary notifications.

4.12.7 Evaporation Pond Action Leakage Rate Response Plan

Should the evaporation pond ALR be exceeded, the evaporation pond ALR response plan will be implemented. This plan will comply with the provisions of 40 CFR 264.223(a)-(c) and will include, but not be limited to, the following activities:

- Calculation of the daily leakage rate for the evaporation pond cell leak detection system
- Schedule of Agency notifications
- Assessments for size, location, and cause of the leak
- Assessments for the impact of the leak
- Short-term corrective actions
- Long-term corrective actions.

Section 9 and Overview 4.12.7 in Appendix A of this document present additional information concerning response actions and necessary notifications.

4.12.8 Liquid Transfer from Evaporation Pond to a Tank

Transfer of liquids from one evaporation pond cell to a truck can be performed via the truck loading/unloading facility. This activity would only be performed if both evaporation pond cells were approaching capacity or if circumstances precluded the transfer of liquid from one cell to the other. For more information, see Overview 4.12.8 in Appendix A of this document.

4.13 Seasonal Winterization/Startup

This section addresses seasonal requirements for facility winterization and startup operations. The ICDF landfill will be operational only during that part of the year that weather permits. The evaporation ponds and the decon building will be operational year round. Specific seasonal facility requirements and implementation steps necessary to (1) prevent damage to facilities and equipment from cold weather, (2) ensure continued safe facility operation, and (3) return systems from "preserved" status to fully operational status in support of ICDF Complex normal operations are outlined in the remainder of this section.

4.13.1 Seasonal Winterization

Seasonal winterization activities will be completed for ICDF facilities (including the two crest pad buildings, the admin trailer, and the SSA) to prevent damage from cold weather and ensure access of snow removal and safety related equipment (i.e., fire hoses, motorized fire equipment).

Heating systems will be inspected and thermostats will be set to appropriate temperatures. Water systems will be protected, secondary containment and condensate will be drained, and staging, parking, and outlying areas will be inspected to identify and relocate items that may hamper snow removal efforts or prevent the efficient handling of safety-related equipment.

A soil stabilization product (i.e., ConCover or equivalent) will be applied to disturbed areas of the landfill using a hydroseeder as appropriate, per the manufacturer's recommendation. This product is expected to last 6 months. Placement of this stabilization is described in Overview 4.9.3a in Appendix A.

Equipment winterization activities associated with the landfill, evaporation pond, and truck loading station will be performed. These activities include removal of liquids from various pieces of equipment, temporary lines, hoses and hose bibs, addition of antifreeze to appropriate equipment, pump removal, and relocation and storage of portable equipment and structures (i.e., landfill personnel shed and associated portable toilet).

4.13.2 Seasonal Startup

Seasonal startup activities will be performed to return systems from "winterized" status to fully operational status in support of ICDF normal operations. These include inspections and associated repairs, equipment operability checks, relocation of portable equipment and structures, removal of antifreeze, and resetting of thermostats on heating and air conditioning units. A radiation inspection of landfill areas will be performed to confirm no loss of contamination control.

4.14 ARAR Operational Compliance Crosswalk

CERCLA determines the applicable environmental compliance requirements in the ROD through the identification of the ARARs. The ARARs that apply to the ICDF Complex appear in Section 12.2.3 of the OU 3-13 ROD (DOE-ID 1999). To demonstrate design and construction environmental compliance, a number of ARAR compliance matrices have been presented throughout the development of previous ICDF Complex documentation (TFR-17 and TFR-71). Previous ARAR compliance matrices have been centered on the design and construction requirements of the ARARs. Table 4-1 presents an ICDF Complex operations compliance crosswalk for those ARARs involving operational requirements.

At the ICDF Complex, operational compliance will be accomplished through a number of mechanisms, including, but not limited to, the following:

- Establishment and monitoring of operational limits
- Regulatory and company-required inspections and audits
- Electronic readings of pertinent operational data
- Databases that are developed for tracking and monitoring
- Alarms established in the engineered systems
- Warning flags incorporated into the waste tracking system.

The implementation of each of these mechanisms is discussed in detail throughout this O&M Plan and in the RAWP (DOE-ID 2003a) and its supporting appendices. Table 4-2 indicates the specific section and/or document that demonstrates compliance with each operational ARAR.

Table 4-2. Operational compliance crosswalk.

Alternative/ARARs citation	Description	Comments	Compliance Document
IDAPA 16.01.01.650, 16.01.01.651	Idaho fugitive dust emissions	Will be met during construction through administrative and engineering controls.	NA[a]
IDAPA 16.01.01.585 IDAPA 16.01.01.586	Rules for the control of air pollution in Idaho	Will be met using administrative and engineering controls.	EDF-2237
40 CFR 61.92 40 CFR 61.93	NESHAP for radionuclides from DOE facilities, emission monitoring and emission compliance	Will be met using administrative and engineering controls.	EDF-2236
40 CFR 122.26	Storm water discharges during construction	Will be met during excavation and disposal through engineering controls.	NA
IDAPA 16.01.05.006 (40 CFR 262.11)	Hazardous waste determination	Applies if the soils disposed outside of the WAG 3 AOC; applies to soils where a hazardous waste determination has not been made.	PLN-914
IDAPA 16.01.05.008 (40 CFR 264.553)	Temporary units	Applies to temporary (< 1 year) storage or treatment units.	DOE/ID-11000, Section 5
IDAPA 16.01.05.008 (40 CFR 264.554)	Remediation waste staging piles	Excavated soils can be temporarily staged prior to disposal in the ICDF without triggering LDRs or minimum technical requirements.	DOE/ID-11000, Section 5
IDAPA 16.01.05.011 (40 CFR 268)	Land disposal restrictions	Applies only to soils from Sites CPP-92, CPP-97, CPP-98, and CPP-99 or soils that have triggered placement.	DOE/ID-10903, DOE/ID-10924, DOE/ID-10865
IDAPA 16.01.05.011 (40 CFR 268.49)	Alternative LDR treatment standards for contaminated soils	Applies only to soils from Sites CPP-92, CPP-97, CPP-98, and CPP-99 or soils that have triggered placement.	DOE/ID-10903, DOE/ID-10865
IDAPA 16.01.05.005 (40 CFR 261.20 through 24)	Hazardous waste characteristics identification	Applies if the soils are excavated and consolidated to facilitate their management and for soils that are treated or placed in a long-term storage unit.	PLN-914; DOE/ID-11000, Section 4.1
40 CFR 761.50(a)(5)	PCB disposal requirements	Applies to PCB-contaminated soils and debris.	DOE/ID-10865; DOE/ID-11000, Section 4.9
40 CFR 761.50(b)(3)	PCB remediation waste	Applies to PCB-contaminated soils and debris.	DOE/ID-10865; DOE/ID-11000, Section 4.9
40 CFR 761.50(b)(7)	PCB radioactive waste	Applies to PCB-contaminated soils and debris.	DOE/ID-10865; DOE/ID-11000, Section 4.9
40 CFR 761.50(b)(8)	Porous surfaces	Applies to PCB-contaminated soils and debris.	DOE/ID-10865; DOE/ID-11000, Section 4.9

Table 4-2. (continued).

Alternative/ARARs citation	Description	Comments	Compliance Document
40 CFR 761.50(d)(4)	Disposal requirements for PCBs	Applies to PCB-contaminated soils and debris.	DOE/ID-10865; DOE/ID-11000, Section 4.9
IDAPA 16.01.05.008 [40 CFR 264.14(a), (b), (c)]	Site security	Applies to either soils capped in place or consolidated in the ICDF.	DOE/ID-11000, Section 4.11
IDAPA 16.01.05.008 [40 CFR 264.15(a),(c)]	General inspection requirements	Applies to either soils capped in place or consolidated in the ICDF.	DOE/ID-11000, Section 8
IDAPA 16.01.05.008 [40 CFR 264.16(a)(1),(c)]	Personnel training	Applies to either soils capped in place or consolidated in the ICDF.	INEEL/EXT-01-01318
IDAPA 16.01.05.008 (40 CFR 264.92)	Groundwater protection standard	Substantive parts of regulations will be met.	DOE/ID-10955
IDAPA 16.01.05.008 (40 CFR 264.93)	Hazardous constituents	Substantive parts of regulations will be met.	DOE/ID-10955
IDAPA 16.01.05.008 (40 CFR 264.95)	Point of compliance	Substantive parts of regulations will be met.	DOE/ID-10955
IDAPA 16.01.05.008 (40 CFR 264.97)	General groundwater monitoring requirements	Substantive parts of regulations will be met.	DOE/ID-10955
IDAPA 16.01.05.008 (40 CFR 264.98)	Detection monitoring program	Substantive parts of regulations will be met.	DOE/ID-10955
IDAPA 16.01.05.008 (40 CFR 264.114)	Disposal and decontamination of equipment, structures, and soils	All equipment will be decontaminated before leaving the ICDF.	DOE/ID-10984, Section 9
IDAPA 16.01.05.008 (40 CFR 264.301)	Landfill design and operating requirements	ICDF will be designed to meet minimum technology requirements or equivalent.	NA
IDAPA 16.01.05.008 [40 CFR 264.309(a) and (b)	Surveying and recordkeeping	Substantive requirements will be met.	PLN-914
IDAPA 16.01.05.008 [40 CFR 264.310(a)(1)(2)(3)(4)(5)]	Landfill closure requirements	Substantive requirements will be met.	DOE/ID-10984, Section 9
IDAPA 16.01.05.008 [40 CFR 264.310(b)(1)(4)(5)(6)]	Landfill postclosure requirements	Substantive requirements will be met.	DOE/ID-10984, Section 9
IDAPA 16.01.05.008 [40 CFR 264.18(a) and (b)]	Landfill location standards	Substantive requirements will be met.	NA
IDAPA 16.01.05.008 (40 CFR 264.302)	Landfill action leakage rate	Substantive requirements will be met.	DOE/ID-11000, Section 4.12
IDAPA 16.01.05.008 (40 CFR 264.553)	Temporary units	Applies for soils or liquids that are managed on-Site.	DOE/ID-11000, Section 5
IDAPA 16.01.05.008 (40 CFR 264.554)	Remediation waste staging piles	Applies for soils that are excavated and managed on-Site.	DOE/ID-11000, Section 5
40 CFR 761.75(b)(1)(2)	PCB landfill design requirements	Applicable for PCB-contaminated soils; substantive requirements will be met.	NA
40 CFR 761.79(a) and (b)	PCB container and moveable equipment decontamination requirements	Applicable for PCB-contaminated soils; substantive requirements will be met.	DOE/ID-10865; DOE/ID-11000, Section 4.9
IDAPA 16.01.05.008 (40 CFR 264.192)	Design and installation of new tank systems or components	Applies to the SSSTF.	NA

Table 4-2. (continued).

Alternative/ARARs citation	Description	Comments	Compliance Document
IDAPA 16.01.05.008 (40 CFR 264.601)	Miscellaneous units environmental performance standards	Applies to the SSSTF.	NA
IDAPA 16.01.05.008 (40 CFR 264, Subpart I)	Use and management of containers	Applies to the SSSTF.	DOE/ID-11000, Section 4.3; DOE/ID-10851 (DOE-ID 2002h); DOE/ID-10865
IDAPA 16.01.05.008 (40 CFR 264, Subpart DD)	Containment buildings	Applies to the SSSTF.	DOE/ID-11000, Section 5
IDAPA 16.01.05.008 (40 CFR 264.Subpart BB)	Air emissions standards for equipment leaks	Applies to the SSSTF.	DOE/ID-11000, Section 3.1; DOE/ID-10865
IDAPA 16.01.05.008 (40 CFR 264.Subpart CC)	Air emission standards for tanks, surface impoundments, and containers	Applies to the SSSTF and evaporation pond.	DOE/ID-11000, Section 3.1; DOE/ID-10865
IDAPA 16.01.05.008 (40 CFR 264.221)	Surface impoundment design and operating requirements	Applies to the SSSTF and evaporation pond.	DOE/ID-11000, Section 4.6
IDAPA 16.01.05.008 (40 CFR 264.552)	Corrective action management units (CAMUs)	Applies to the evaporation pond.	DOE/ID-11000, Section 4.6
IDAPA 16.01.05.006 (40 CFR 262.34[a][1])	Hazardous waste accumulation time	Applies to the SSSTF.	DOE/ID-11000, Section 5
IDAPA 16.01.05.008 (40 CFR 264, Subpart F)	Releases from solid waste management units	Applies to closure and postclosure of ICDF Complex.	DOE/ID-10955; DOE/ID-10984, Section 9; DOE/ID-10998
IDAPA 16.01.05.008 (40 CFR 264, Subpart G)	Closure and postclosure	Applies to closure and postclosure of ICDF Complex.	DOE/ID-10984, Section 9
IDAPA 16.01.05.005 (40 CFR 261.20 through 24)	Hazardous waste characteristics identification	Applies to soils received from outside the WAG 3 AOC.	PLN-914; DOE/ID-11000, Section 4.1
16 USC 469 et seq. 36 CFR 65	National Archeological and Historical Preservation Act	Will be met during siting new excavations/construction in previously undisturbed areas.	NA
25 USC 3001	Native American Graves Protection and Repatriation Act	Will be met during siting new excavations/construction in previously undisturbed areas.	NA
IDAPA 16.01.05.005 (40 CFR 261)	Identification and listing of hazardous waste	Substantive requirements will be met for soils received from outside the OU 3-13 AOC.	PLN–914; DOE/ID-10865
IDAPA 16.01.05.006 (40 CFR 262.11)	Hazardous waste determination	Will be met for off WAG 3 materials prior to excavation by characterizing wastes from outside the WAG 3 AOC.	PLN–914; DOE/ID-10865

a. NA means that the ARAR is not applicable to the operational functions at the ICDF Complex.

5. WASTE UNIT DESIGNATION AND OPERATIONAL APPROACH

Several areas are designated in the ICDF Complex to facilitate operations of the ICDF Complex; these areas are

- Staging and storage areas
- Decon building
- Truck in-transport area.

This section describes the waste units (staging and storage areas and decon building) and the operational approach for each. The final section describes the truck-in transport area.

In addition, an empty container staging area has been set aside to facilitate ICDF Complex operations. The empty container area (100 × 300 ft) may hold empty containers that meet free-release criteria such as roll-offs, waste boxes, etc. The empty container staging area is not a waste storage/staging area; therefore, it is not further discussed in Section 5.1.

The ICDF landfill and evaporation pond are also considered waste units of the ICDF Complex. The location and design standards for these units are provided in the ICDF RD/CWP (DOE-ID 2002b). The operational conditions associated with operation of the ICDF landfill and evaporation pond are provided in other sections contained within this ICDF Complex O&M Plan.

5.1 Staging and Storage Area Unit Designations

Wastes consolidated within staging piles operated in accordance with 40 CFR 264.554 are not considered storage, and placement will not occur provided the waste is removed within 2 years of the date that the waste was moved into the staging pile. This operational approach is important since it allows the ability to stage CERCLA waste during the winter months, when the ICDF landfill is not operational.

The use of storage and staging areas will allow sufficient flexibility to operate the ICDF Complex. These waste units will be placed within the fenced boundaries of the ICDF Complex or at the SSA, a part of the ICDF Complex. The staging areas will be managed in accordance with 40 CFR 264.554, and the storage areas will be managed in accordance with 40 CFR 262.34(a)(1). Stored containerized waste will meet the substantive requirements of 40 CFR 264, Subpart I, and aqueous waste stored in tanks will meet the substantive requirements of 40 CFR 264, Subpart J. These areas are shown in Figure 5-1. Profile cross sections of the staging areas within the ICDF Complex are shown in Figure 5-2. Staging and storage areas established at the SSA are shown in Figure 5-3.

ALARA practice may be implemented depending upon the waste, and waste will be stored, as necessary, using the dense pack configuration resulting in only one side being visible.

The staging and storage areas for the ICDF Complex will be designed and operated to satisfy the standards discussed in the remainder of this section.

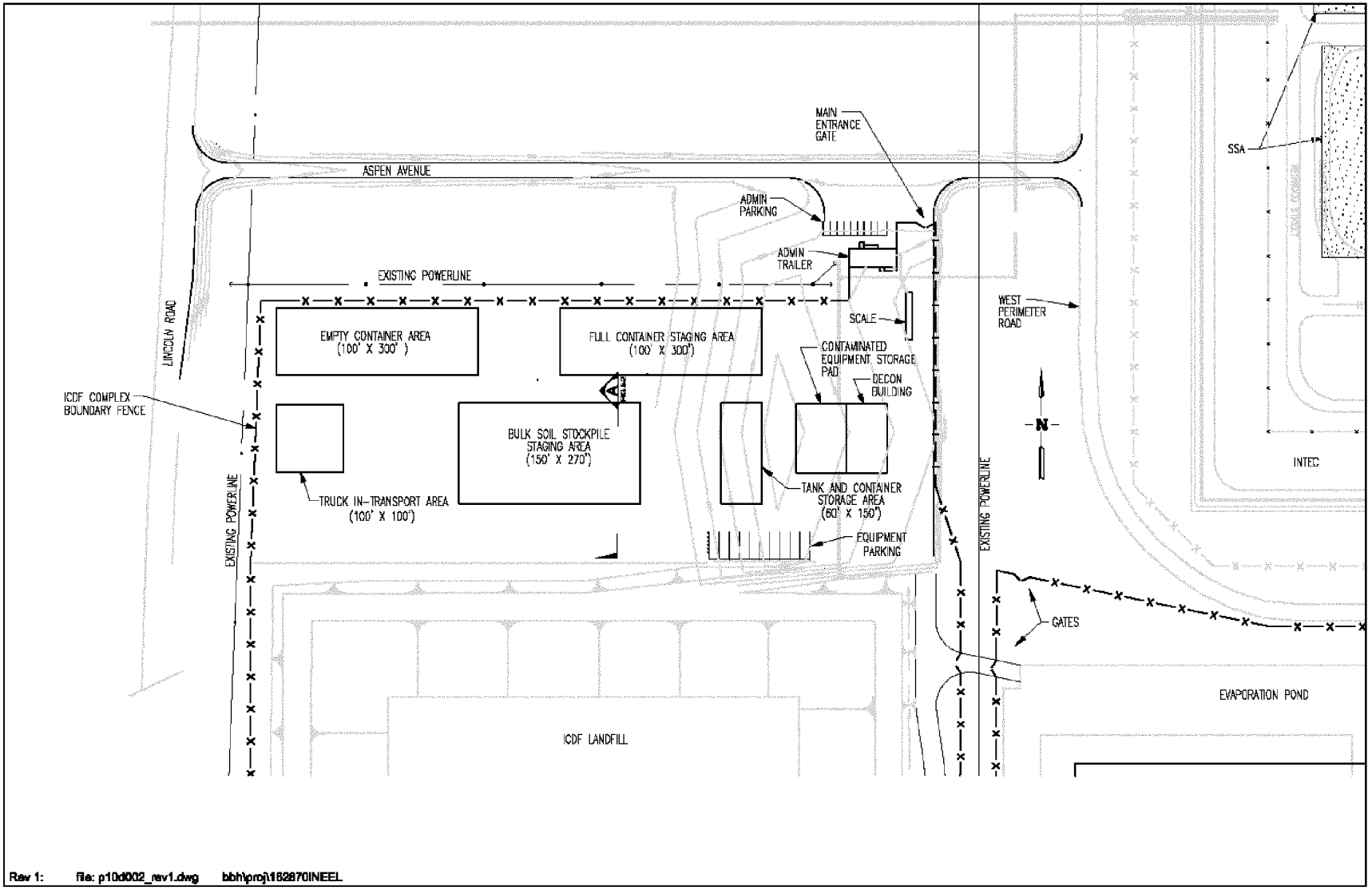

Figure 5-1. Site plan and storage/staging area designation.

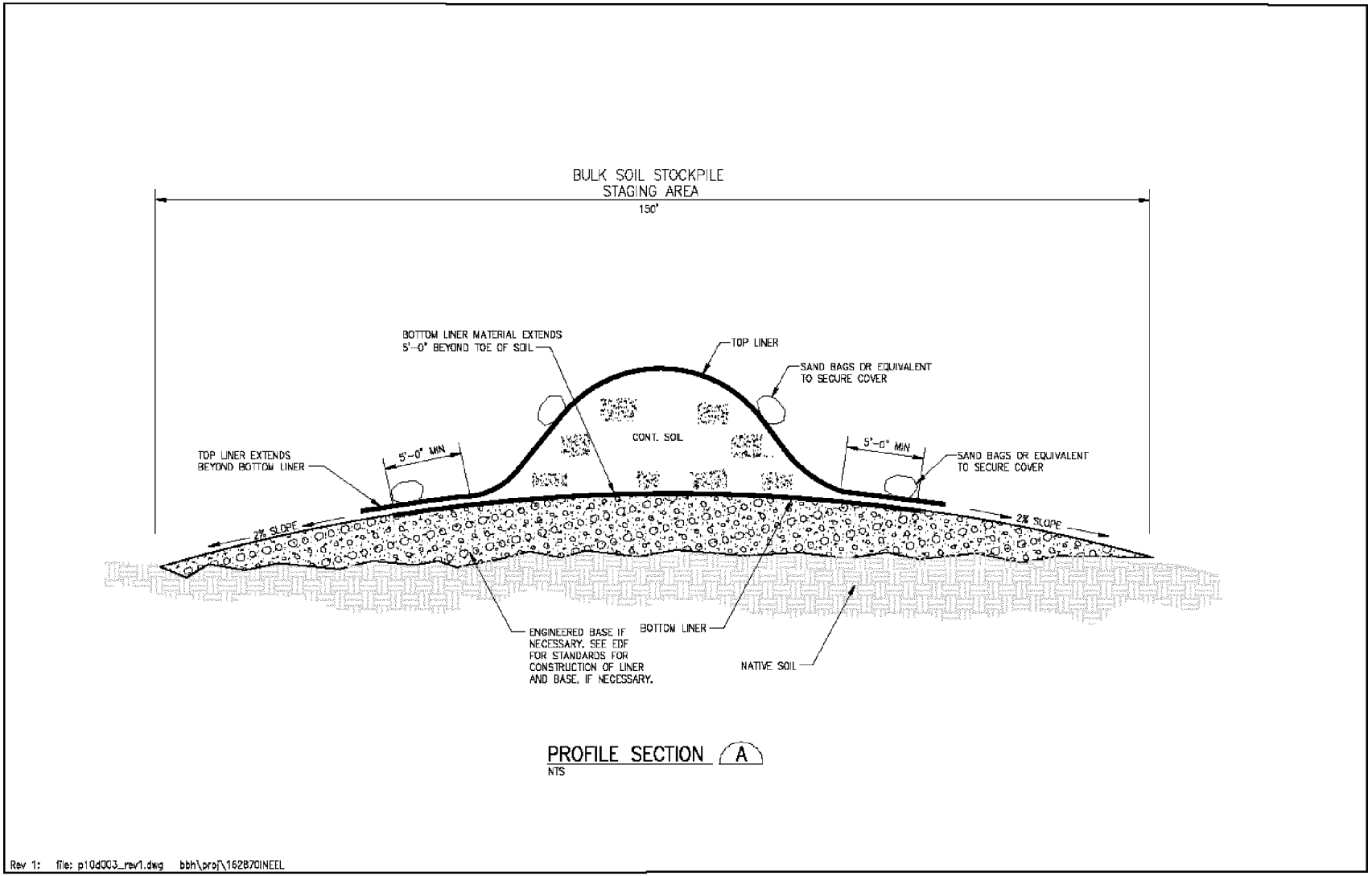

Figure 5-2. Profile section for waste storage/staging areas.

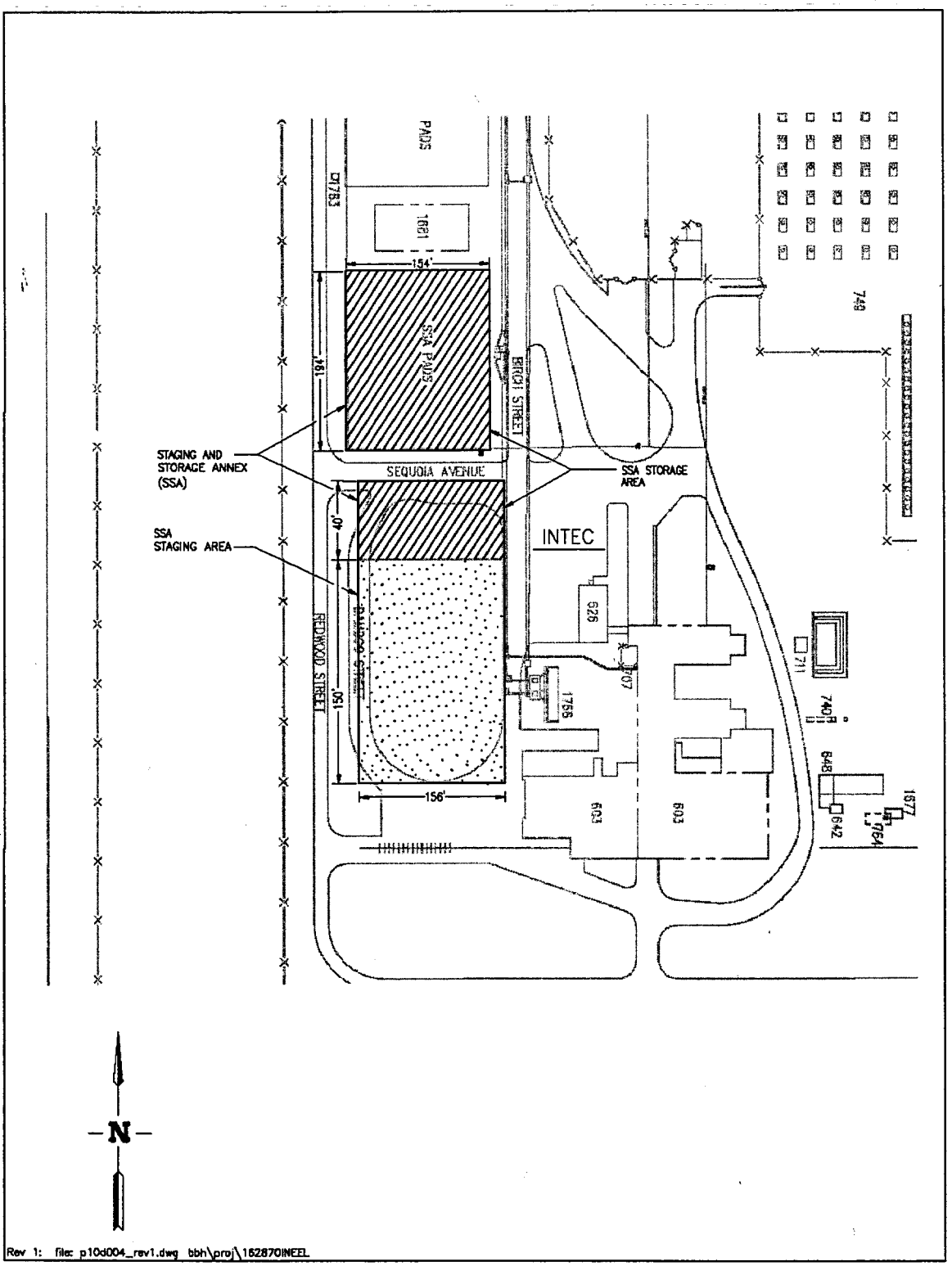

Figure 5-3. SSA storage area and SSA staging area.

5.1.1 Location Standards

The following location standards have been identified for the staging areas:

- **Location at the ICDF Complex:** The staging and storage areas designated are within the limits of the ICDF Complex, which includes the SSA, as identified in the ICDF Complex RAWP.
- **Number:** Three staging areas: full container staging area, bulk soil stockpile staging area, and SSA future staging area; and two storage areas, tank and container storage area and SSA storage area are established to facilitate ICDF Complex operations.
- **Physical location:** The locations of the staging and storage areas are shown in Figure 5-1 and 5-3. Profile cross sections of the staging areas within the ICDF Complex are shown in Figure 5-2.

5.1.2 Design Standards

Five waste staging and storage areas are planned for the ICDF Complex, as shown in Figure 5-1:

- SSA storage area (northern portion of SSA, capacity 5,000 yd^3)
- SSA future staging area (southern portion of SSA, capacity 5,000 yd^3)
- Full container staging area (100 × 300 ft, capacity 10,000 yd^3)
- Bulk soil stockpile staging area (150 × 270 ft, capacity 7,500 yd^3, modular operations concept will accommodate 2,400 to 3,000 yd^3)
- Tank and container storage area (60 × 150 ft, capacity 56,000 gal).

A prefabricated storage container may be located at the ICDF Complex within the tank and container storage area for storage of PCB wastes. This container will be an enclosed portable unit with a steel roof and walls. The footprint of the storage area is approximately 20 × 50 ft (1,000 ft^2), with a usable storage capacity of approximately 5,000 ft^3. The prefabricated container will have loading ramps that will be connected following placement, and a built-in spill containment sump. Although the unit is portable, it will be located within the tank and container storage area.

The following standards apply to the design of the waste units:

- **Hydrogeologic conditions** are the same throughout the ICDF Complex; therefore, all areas will utilize the same design.
- **Fenced areas:** The areas will be within the fenced area of the ICDF Complex, with the exception of the SSA, which is fenced area separately within INTEC.
- **Boundaries:** The area will be roped off or fenced and posted with appropriate signs.
- **Physical dimensions:** The dimensions of the staging areas are shown in Figure 5-1 and Figure 5-3.
- **Base material:** The base of the staging area will be the same as the base of the ICDF Complex infrastructure, which, as shown in Figure 5-2, includes sloped compacted gravel. Additional

information regarding the liner material will be provided in an Engineering Design File (EDF) that discusses alternatives for protection of staging area liner systems (see run-on run-off controls).

- **Independent PE certification:** An independent professional engineer (PE) certification will be obtained for any tanks within a storage area, in accordance with the requirements of 40 CFR 264, Subpart J.

5.1.3 Operational Conditions

- **Designation:** Staging and storage areas are designated by this O&M Plan (Figures 5-1 and 5-3). Operations of the staging and storage areas will comply with the operational overviews for waste placement and tank management provided in Appendix A to this O&M Plan.

- **Waste tracking:** This O&M Plan provides for waste tracking throughout the ICDF Complex. Waste tracking in the staging and storage areas is performed in accordance with PLN-914.

- **Waste management in staging piles:** The wastes will not be added or removed during inclement weather (e.g., periods of precipitation, high winds). The working face and liner with waste soils will be covered at the end of each work day.

- **Time limits:** The time limit for staging wastes is 2 years per waste stream; it is then disposed or moved to an appropriate storage location. A request for a 180-day extension of the time limit may be submitted to the Agencies, provided sufficient and accurate information is included with the request that demonstrate the continued operation of the staging area would not pose a threat to human health and the environment, and is necessary to ensure timely and efficient implementation of remedial action. Waste placement and LDR issues may be applicable after the 2-year time period.

- **Permitted waste types:** Solid, nonflowing wastes are permitted in the staging areas. Storage areas are designated (see Figure 5-1) to receive aqueous wastes.

- **Incompatible wastes**, if any, may not be stored in close proximity.

- **Consolidation of waste:**

  - Nonflowing wastes may be consolidated within containers (e.g., roll-on/roll-off, drum, and waste box) within a staging area.

  - Waste may be consolidated within a designated staging area in soil piles on liners, with operational controls as are described in Appendix A of this O&M Plan.

  - Tanks may be placed in the tank and container storage area or the SSA storage area, as shown on Figures 5-1 and 5-3.

- **Run-on/run-off control:** Adequate run-on/run-off control is provided as part of the ICDF Complex design. Soils in the waste staging piles are to be managed in a manner to eliminate any potential run-on/run-off from entering the staging pile, or run-off from contacting the soils, thus eliminating the need to contain run-off. The staging piles will be designed (see Figure 5-2) as follows:

  - The soils pile shall be placed on an impervious liner. There will be at least a 2% slope away from the soil waste pile to ensure proper drainage.

  - The bottom liner material for the soil shall be of sufficient strength /design to withstand the planned staging and subsequent removal of soils. The technical specifications will be

established in an EDF that discusses alternatives for protection of staging area liner systems that will include requirements for base material and equipment restrictions if necessary.

  - The bottom liner will extend at least 5 ft beyond every edge of the waste soil pile.

  - An impervious man-made material (cover) shall be used to cover the soils piles at all times that the soil is not being actively managed (placing, sampling, or removing waste). The cover must extend beyond the bottom liner and be secured to ensure that the staging pile soils are not exposed to the wind, precipitation, or elements.

  - The cover shall be an impervious material sufficient to withstand site conditions, (e.g., sun, wind, cold, heat, and movement to expose/cover the working face).

- **Fugitive dust control:** Staging piles that contain bulk waste will be covered with a tarp or impermeable material.

- **Inspections:** Section 8 of this O&M Plan and Procedure Overview 8.4 in Appendix A of this O&M Plan describe the inspection requirements for the staging and storage areas.

- **Containers:** Section 4 of this O&M Plan describes management of containers in staging areas.

- **Closure:** At the close of the active life of the ICDF Complex, all staging and storage areas will be closed in accordance with Section 9 of the RAWP (DOE-ID 2003a). The staging piles will be closed after removal of the waste, at a minimum of every 2 years. Documentation of removal of the waste and elimination of the threat of release to the environment will be required.

5.2 Decon Building

The decon building has been designed and will be operated as a containment building in accordance with 40 CFR 264, Subpart DD. The following sections detail the location, design standards, and operational conditions for the decon building.

5.2.1 Location Standards

The decon building is located within the fenced area of the ICDF Complex, north of the landfill. There are no regulatory location standards for the decon building per 40 CFR 264, Subpart DD.

5.2.2 Design Standards

The decon building has been designed to meet the following requirements:

- **Completely enclosed** with a floor, walls, and a roof to assure containment of managed wastes.

- **Design and constructed** of materials of sufficient strength and thickness to support them.

- **Free-standing building** designed to withstand daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls.

- **HEPA and air filtration system** that provide an effective barrier against fugitive dust emissions.

- **Manage** hazardous wastes containing free liquids or treated with free liquids, including:

  - Primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier.

- A liquid collection and removal system has been designed to drain liquids into the collection system and minimize the hydraulic head as soon as practical. A pump will discharge the waste into the evaporation pond via the pump station.

- A secondary containment system is part of the building design. This system is constructed with a bottom slope of 1% or more and is constructed of a granular drainage material with a hydraulic conductivity of 1×10^{-2} cm/sec or more and a thickness of 12 in. (30.5 cm) or more, or constructed of geonet drainage materials with a minimum transmissivity of 3×10^{-5} m^2/sec. A liner is also present.

- **Independent qualified, registered PE certification** will be obtained for the decon building.

5.2.3 Operational Conditions

The decon building will be operated to ensure that the following conditions are met:

- **Incompatible hazardous wastes** or treatment reagents will not be placed in the unit or its secondary containment if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail.

- **Decon building** will be kept free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier.

- **Level of the stored/treated hazardous waste** within the containment walls of the unit will be maintained at a height less than the height of the decon building walls.

- **Waste will be tracked** through the unit using IWTS. Decon and rinsate will be collected in the concrete P-trap and sent to the evaporation pond.

- **Dust emissions** within the building will be controlled through the HEPA filtration and air filtration system.

- **Notifications** will be in accordance with Section 9 of this O&M Plan.

- **Inspections** will be in accordance with Section 8 of this O&M Plan.

5.3 SSA Storage Partial Closure/SSA Staging Area

The SSA was initially set up as a storage area under 40 CFR 262.34. This included two areas: one asphalt, inside the fence and a second, graded gravel area south of the road (see Figure 1-2). This document will serve as closure documentation for the southern 150 ft of the SSA area south of the road. The northern 40 ft will remain as part of the staging area.

DOE-ID has reviewed the weekly inspection reports for the SSA. There have been no spills on the gravel area south of the road. The maximum volume of waste stored in the area south of the road was 606 ft^3.

All waste that was stored within the southern 150 ft of the SSA was removed prior to January 31, 2003. Only containerized waste was previously stored in this area. The record review indicates that there were no spills within the designated area to be closed and subsequently used as a staging area. Therefore, there were no residuals to be removed as part of closure of this area. Since all waste containers have been removed from this area and there were no spills to the environment, the

closure of the area is protective of human health and the environment and there is no potential escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground, surface water, or the atmosphere.

It should be noted that this area is designated for further use as a 40 CFR 264. 554 area for staging waste. As such, this area will require closure in accordance with 40 CFR 264.554 on or before closure of the ICDF Complex.

5.4 Truck In-Transport Area

The truck in-transport area measures approximately 100 × 100 ft. The maximum number of trucks that can be held in the truck in-transport area is 25. The purpose of this area is to allow for truck parking until resolution of waste acceptance can be negotiated with the ICDF Complex user. Should conditions arise which prevent the off-loading or transportation of containers, the vehicle may be parked inside the truck in-transport area. Under normal conditions, this will not exceed 10 working days. If the discrepancy cannot be corrected within 10 working days, the waste will be returned to the generator, assuming the shipment back to the generator would not violate DOT regulations. The return of the waste to the generator will require the generating site to have the capability of accepting these returned wastes. If conditions arise which require the truck to remain at the ICDF Complex for more than 10 working days, the waste may be transferred into one of the approved staging or storage areas, provided the waste meets the requirements of the waste management area.

6. EQUIPMENT MAINTENANCE

ICDF Complex maintenance will be part of the INEEL maintenance program which includes preventive, predictive, and corrective maintenance that ensures the availability and reliability of plant SSCs important to safe and productive facility operations. SSCs are classified, based on their importance in compliance with the INEEL authorization basis, the unacceptability of their failure, and the likelihood that repetitive maintenance will be required.

6.1 Equipment Maintenance

Maintenance of ICDF Complex equipment falls into three categories that are discussed in the following sections:

- Preventive/predictive maintenance
- Corrective maintenance
- Calibrations.

ICDF-installed equipment will include leachate pumps, transfer pumps, level-sensing devices, flow meter/totalizers, truck scale, and the PLC computer system. Mobile equipment will include trucks, roll-on/roll-off containers, bulldozer, loaders, forklifts, and a water truck.

A more detailed list of equipment for ICDF Complex operations is in Appendix B of this document. Management of the wastes generated by maintenance activities will be guided by *INEEL CERCLA Disposal Facility Complex Operations Waste Management Plan*, (DOE-ID 2003b), which can be found as Appendix G of this RAWP.

6.1.1 Preventive Maintenance

Appropriate preventive maintenance/predictive maintenance (PdM) tasks are selected for SSCs, based on the importance of their classification, and a cost-benefit analysis focused on optimizing the life of the SSCs. Maintenance versus replacement, based on PdM techniques, is evaluated for cost-effective use, especially for SSCs that must be reliable and available for safe operations and mission accomplishment. When justified by a cost-benefit analysis, preventive maintenance tasks are established on a frequency to anticipate and correct conditions prior to SSC breakdown. SSCs for which preventive maintenance/PdM tasks are not cost-effective, are allowed to run to failure with the concurrence of Facility Operations.

6.1.2 Corrective Maintenance

Corrective maintenance is the repair or rework of failed or malfunctioning equipment to restore the intended function or design condition. This maintenance does not result in a significant extension of the expected useful life of the equipment. When corrective maintenance is performed, the condition that causes failure in the equipment is analyzed to determine the cause of failure and identify the proper corrective actions to prevent recurrence.

6.1.3 Instrument Calibration

The goal of a calibration program is to ensure instrument readings are correct to within a determined tolerance. Generally, this is done by comparing the instrument to a standard. Standards are

devices of higher accuracy used to calibrate the ICDF Complex instruments. The INEEL has a calibration program based largely on ANSI Z540-1. After construction turnover, the ICDF Complex will be operated as part of the INTEC facility. The INTEC facility has a calibration program in conformance with the overall INEEL program. For the purposes of this section, the term "instrument" can also be taken to mean "instrument loop." An instrument loop is a group of instruments used to obtain a measurement. The major characteristics of the calibration program are

- Instruments have a calibration interval determined, then documented, in a database.
- Instruments are on a recall system that informs the instrument owner when the instrument is due for calibration.
- Instruments found out of tolerance are evaluated for possible actions. For example, if the instrument was used to develop information for a report, the report may need to be recalled or revised. Another possible action may be to decrease the calibration interval.
- Standard used is tracked. If a standard is found out of tolerance, the instruments it was used to calibrate can be checked to ensure they are within tolerance.
- Standards generally have an accuracy four times better than the instrument. For example an instrument with an accuracy of 1% will be calibrated using a standard with an accuracy of 0.25% or better.
- Calibration results (as found and as left instrument readings or settings) are kept for reference.

Most calibrations involve the comparison of a standard to an instrument with adjustment made to the instrument if necessary. Nonadjustable instruments such as float switches are also included in the calibration program. While not a true calibration, instrument operation is verified at a set interval and records kept.

Data in the calibration program are controlled. New entries and changes to the calibration database are reviewed. There are two review levels, with set-point and range changes reviewed to a greater extent than other requested changes.

If an instrument is found out of tolerance and cannot be brought into tolerance or if an instrument has failed, it is taken out of service. When an instrument is taken out of service, labeling is installed to inform the operators that the reading should not be used.

Calibration/certification of the truck weigh scale will be performed by the Idaho State Department of Agriculture, Bureau of Weights and Measures.

6.2 Facility Maintenance

6.2.1 Building Maintenance

Routine maintenance activities for the admin trailer, decon building, and evaporation pond crest pad buildings will be performed by crafts through the on-Site maintenance program. These activities include repairs to doors, windows, flooring, plumbing, roofs, and interior walls. Work requests will be initiated through the centralized call center. Custodial services and snow removal will be coordinated with existing INTEC programs.

6.2.2 Heating, Ventilating, and Air Conditioning

The admin trailer will be supplied with a central heating and air conditioning system. The landfill and evaporation pond crest pad buildings will be equipped with radiant heaters and wall-mounted air conditioners to maintain a temperature range compatible with instrumentation requirements. The decon building will have radiant heaters in all rooms with no provision for cooling. Maintenance of these systems will primarily be achieved through the program of seasonal planning for winter and summer.

Winterization tasks will include inspection of all heaters, cleaning of enclosures to remove dust and debris, replacement of filters, functional tests of heating units and thermostats, and the covering of evaporation pond crest pad building wall-mounted air conditioners. Preparations for summer, to be completed between April and June, will include the removal of any covers installed for winter, inspection of air conditioners, cleaning of enclosures, changing of filters, and functional testing of units and thermostats.

6.2.3 Electrical Systems

Electrical switch gears, transformers, motor control centers, circuit breakers, etc. will be inspected by qualified craft persons on a frequency based on PdM evaluations. Repairs will be made as needed. The frequency of inspections will be determined by manufacturer's recommendations and/or Site maintenance program policies.

6.2.4 Lighting

An operational check of lighting systems will be made monthly. This will include the interior and emergency lighting inside all buildings and any exterior light fixtures. Repairs or bulb replacements will be made as needed. A work order may be prepared to correct lighting deficiencies noted in other facility inspections or by the operations staff by using the INEEL maintenance program.

6.2.5 HEPA Filtration Systems

There are two HEPA filtration systems in the decon building. One services the decon bay and the other services the treatment area. Each system contains four prefilters and eight HEPA filters. A Site-wide program is responsible for the in-place testing of HEPA filters. Only trained and certified personnel perform in-place testing. HEPA systems are tested after installation, modification, repair, and at least annually thereafter.

Operational conditions/observations that will require the involvement of the INEEL HEPA Filter/Ventilation Group would include

- High differential pressure of 5-in. water gauge or greater
- Reduction in differential pressure indicating a breach
- Occurrence of a fire or an off-normal chemical release into the ventilation system
- Apparent air flow restrictions
- Any suspected problems with the filter system.

HEPA testing and filter changeout will be performed in accordance with Section 10 of ASME N510, subject to concurrence by the FFA/CO Agencies. If wetting is suspected, the filters will be evaluated and replaced as necessary in accordance with applicable INEEL procedures.

Servicing of the exhaust fans, drive motors, and instrumentation will be based on PdM evaluations. Corrective maintenance will be performed through the INEEL maintenance program.

6.2.6 Treatment Equipment

Inasmuch as the treatment equipment has not been finalized, specific maintenance activities have not been identified. Anticipated equipment includes a container unloading apparatus, mixing unit with discharge capability, stabilization agent feeding apparatus, fugitive dust control equipment, and a grout mixing/injection unit for debris treatment. Additional equipment may include pallet jacks or other equipment for moving containers.

Expected preventive maintenance activities would be lubrication of bearings and rollers and changing gearbox fluids. Further information will be provided in the draft final document once the final design of the treatment unit has been accepted.

6.2.7 Water Systems

The ICDF Complex has three types of water sources from INTEC: potable water, fire water, and raw water. All are branch connections from INTEC systems with isolation valves at the connection points.

Other than periodic flow tests and inspections of the fire protection post-indicator valves and hydrants, no regular ICDF maintenance activities are anticipated.

6.2.8 Sanitary Sewage System

Sanitary sewage will be collected from the admin trailer and decon building in a common sump equipped with two pumps and ultrasonic level instrumentation. Sewage will be transferred under pressure to a sewer main inside the INTEC. The pump control panel will have a trouble alarm light. A cost-benefit analysis will determine if the pumps and level instrumentation will receive preventive maintenance or if they will be operated to failure and then replaced.

6.2.9 Evaporation Pond Lining System

The liner repair instructions are presented in the Technical Specifications for the ICDF (SPC-1476). Relevant sections include the following:

- Separation and cushion geotextile repair is in Section 02371
- Sacrificial and primary geomembrane repair is in Section 02661
- Primary and secondary geosynthetic clay liner (GCL) repair is in Section 02667.

All pertinent information for repairs from SPC-1476 and any other vendor data will be included in the master equipment list (MEL) entry for the evaporation ponds in the "repair information" section.

6.3 Grounds and Perimeter Maintenance

Monitoring of the grounds and perimeter fences will be accomplished through the weekly landfill and evaporation pond inspections. Maintenance activities will include

- Repair of fences
- Repair/replacement of warning or directional signs
- Weed and debris removal from storm run-off ditches
- Removal of vegetation and debris from around fences and buildings for fire prevention
- General housekeeping of storage areas and equipment pads
- Snow removal from access routes, equipment pads, and storage areas
- Placement/spreading of snow-melt or dry sand in pedestrian traffic areas.

6.4 Spare Parts and Special Tools

The preparation of spare parts lists and special tool requirements will be accomplished as the manufacturer's data are received. The facility engineer and facility manager will review the complete spare parts list and identify those parts or tools that should be added to the material inventory system. Procurement, storage, and utilization of spare parts will be coordinated through the INEEL maintenance program.

Spare parts that can directly impact the protectiveness of the remedy are listed in Appendix B (Table B-2) of this document.

7. FACILITY CONFIGURATION CONTROL

An effective operational configuration management (CM) program involves the consistent identification of items requiring configuration control, management of requirements and documentation applicable to the items, and control of changes to those items.

The cumulative benefits of a CM program include increased safety and reliability, improved environmental protection, and a reduced potential for extended shutdowns through the following:

- Improved availability and retrievability of accurate information to support safe, sound, and timely, decisions related to design, construction, fabrication, maintenance, and operations
- Enhanced worker safety by providing assurance that equipment will perform as intended and by reducing exposures to unknown hazards due to equipment being in the wrong configuration
- Increased efficacy by ensuring the prompt availability of needed information, thereby preventing errors and resultant rework, reducing duplication of effort, and improving scheduling and planning estimates.

7.1 Physical Equipment

Equipment and piping that are installed as permanent fixtures in operating facilities must be labeled to INEEL Site standards. Components requiring labeling include valves, major equipment, switches, circuit breakers, fuse blocks or fuse locations, instruments and gauges, buses and motor control centers, electrical cabinets, room doors, emergency equipment, fire protection equipment, and piping. Operations procedures will identify equipment as it is labeled in the facility.

Labels will be placed on, or as near as possible, to the equipment to be labeled. The label will be oriented in a manner that is easy to read and should not interfere with equipment operation or obscure indicators. Piping will be labeled to indicate the fluid contained and the normal flow direction.

Equipment information and specific data for each item determined to be under configuration management are entered into the configuration management database. These data include the location of the item, manufacturer, safety category, service status, associated drawings, and any associated documents.

Information for all equipment is entered into the MEL database. The MEL is used for preparation and performance of maintenance work orders. Data input to the MEL for each equipment item include all data from the CM database and the following additional information: name of the equipment, model number, serial number, location, set points and operating limits, spare parts reference numbers, recommended preventive maintenance intervals and activities, personal protective equipment, special tool requirements, and vendor reference information and correspondence.

7.2 Drawings

Drawings are developed, assessed, and maintained to ensure they portray technically correct and approved design information in support of operations and maintenance. Drawings are controlled by the Site-wide Document Management Control System (DMCS). Changes to a drawing may only be made using the Document Action Request (DAR) form process. If the drawing is included in a primary document under the FFA/CO, the change must also receive concurrence from EPA, IDEQ, and DOE-ID PMs.

A proposed change must, at the minimum, be reviewed and approved by the facility engineer, facility manager, and site area engineering manager. The facility manager may request additional reviews/approvals by subject matter experts (SMEs). The completed revision to a drawing is reviewed and approved by the disciplines identified by the facility manager.

Drawings are classified as "essential," "master facility," or "other" by the facility engineer with the concurrence of the facility manager.

An essential drawing has been deemed necessary for the safe operation and maintenance of a facility and the protection of workers, the environment, or the public. An example of an essential drawing is a piping and instrumentation diagram (P&ID), electrical one-line, or an electrical panel schedule. A master facility drawing has been selected as necessary for the routine operations and maintenance of a facility. A master facility drawing would be a building lighting plan or detailed piping plan. An "other" drawing would be a floor plan or building structure.

An "interim" drawing is used to maintain an essential drawing in the as-built condition during a system modification. An example would be issuing an interim drawing of an electrical panel showing the addition of a new circuit breaker to maintain the as-built condition of the essential drawing until the drawing revision can be issued.

7.3 Instrument Calibrations

The INEEL has an integrated Site-wide calibration program based on ANSI Z540-1. Data for instruments that will be calibrated are maintained in a controlled database. Calibration frequency and tolerances are based on the manufacturer's recommendation and/or applicable national standards.

All calibrated process instruments will have a sticker that indicates when the next calibration is due. This information will also be contained in the calibration program database.

Radiation measurement instrumentation calibrations are maintained by the Health Physics Instrumentation Laboratory (HPIL).

7.4 Facility Changes/Modifications

Proposed changes to facilities or systems are reviewed by the facility engineer to determine if the Engineering Change Form (ECF) process is applicable. The ECF is the Site-wide method for tracking an engineer change. It is used for

- Describing the proposed engineering change
- Documenting activities associated with the design of the modification
- Authorizing the change
- Identifying required safety and environmental reviews
- Recording the review of the change
- Identifying the document affected by the change

- Tracking the implementation of the change into all affected documents
- Ensuring that the modification is signed off as completed.

Routine maintenance activities, such as the like-for-like replacement of a pump or instrument, do not require an ECF. Physical changes to a system, such as the addition of a valve or installing a larger pump, do require an ECF. Changes to computer systems, hardware, and software, are controlled by a separate program that is discussed in Section 7.6 of this document.

If the changes require a change to a primary FFA/CO document, a DAR will be completed and sent to the Agencies for approval.

7.5 Procedures

Technical procedures (TPRs) are controlled documents used for operating systems and equipment to ensure the facility is operated within its design basis and to support safe and reliable operations. Developing, modifying, or canceling a TPR is conducted through the DAR process of the Site-wide DMCS.

The minimum review/approval is the document owner (usually the facility manager) and document author. Modifications require at least the same level of review/approval as the original TPR. The document owner determines the SMEs that will participate in the review process. TPRs for instruction on operating systems and equipment will have a JSA. The JSA is prepared by the Hazard Evaluation Group (HEG) to ensure that hazards and appropriate mitigations are identified for each step. The HEG, at the minimum, is comprised of one operations worker and a member of management. Other safety professionals are assigned to the HEG as determined by the Hazard Screening Checklist review performed by the operations organization. A HEG review is required each time a procedure is changed.

The local document control center maintains records of the completed DARs with the approval signatures and the approved JSAs. Controlled copies of the finished TPRs are issued by the document control center and placed in the operations manuals at designated locations. Operations staff are informed of changes in the daily prejob briefing or through the required reading program.

7.6 Computer Hardware and Software Programs

The data collection system is based on equipment (hardware) that must be configured (programmed). The configuration, among other things, determines what is displayed on the HMIs, when alarms occur, what information is archived, how devices are interlocked, and when pumps are automatically turned on.

Therefore, it is necessary and proper that the hardware and configuration (software) changes be controlled. The INEEL has procedures that require configuration management of software. In addition, the data collection system has a Configuration Management Plan (CMP) that deals with the system in detail. This configuration management plan comes into effect when the hardware is accepted from the construction project. It is expected and required that the project supply as-built hardware and configuration information at project construction completion.

From the configuration management plan viewpoint, the system consists of three parts: hardware, software, and set points.

The major system hardware components have been given equipment names.

The hardware is controlled and tracked using an equipment database. Information access (input and removal) requires the completion of a form that is reviewed and approved by a facility engineer.

The configuration access is controlled with passwords. The passwords prevent unauthorized persons from gaining access to the configuration. As far as the configuration is concerned there are two levels of passwords. The higher level is the system manager who has access to all parts of the configuration. The other level of access is instrument technician. This level only allows access to the control set-point values.

NOTE: *Operating considerations may require operators be allowed access to certain set points. This practice is discouraged and is not general operating practice.*

Copies of the software configuration are required to be kept. Individual changes to the software require completion of a form. The form must be approved before changes to the configuration can be made.

Set points are controlled as part of the calibration program. The calibration information (including set points) is kept in a database. The set points are controlled though the use of forms. The forms go though an approval process. Once the forms are approved the calibration information in the database is changed and the instrument technician can change the value in the ICDF Complex data collection system configuration.

7.7 Training Qualifications and Records

The Site-wide Training Records and Information Network (TRAIN) database maintains the training records for all INEEL and subcontract employees. These data are available to all employees via the INEEL intranet. Computer-based training classes are recorded in TRAIN as soon as the session is completed. Classroom courses are usually uploaded by the next working day. This allows operations supervision to easily confirm the qualification status of employees. Notification is also sent to the facility training coordinator of qualifications that are coming due for all staff. The ICDF Complex HASP, Table 6-1, has all the training requirements by position (INEEL 2003).

7.8 Document Control Records Management

Management of records is performed by a Site-wide system. A Uniform File Code list has been developed for the proper filing and retention of record material. This system is utilized for hardcopy and electronic media. Additional information on record management is in Section 10 of this document.

8. INSPECTIONS

This section describes the various inspections that will be performed at the ICDF Complex as a part of routine O&M. The information is subdivided into sections that describe ICDF Complex inspections, landfill inspections, evaporation pond inspections, waste storage/staging inspections, decon building inspections, and tank inspections.

8.1 ICDF Complex Inspections

The required inspections for the ICDF Complex will be conducted during the facility's operations. These inspections cover all operations of the Complex and are not specific to any one operation. Inspections will be performed weekly, unless otherwise noted, and will be documented through the use of logbooks, checklists, or other appropriate electronic or hardcopy format.

The ICDF Complex perimeter and inside fences will be inspected to ensure that fences are in good condition, that there is no buildup of wind-blown material, that gates are functional and closed when not in use, that locks are in working order, and that perimeter warning signs are properly placed and in good condition.

Following a significant storm event (defined as one half of the 25-year, 24-hour event, which is 0.85 in. in 24 hours, as measured at CFA) the following will be performed within 24 hours following the storm or, in the case of a weekend, holiday, or planned cessation of operations, during the next business day:

- The ICDF Complex access and haul roads will be inspected for severe erosion of roads or embankments (defined as measurable gullies and erosion channels in excess of 6 in. deep), for evidence of spills, and for adequate drainage, to ensure that the roads are in a condition to allow safe operation.
- The ICDF Complex storm water runoff control ditches will be inspected to ensure the following:
  - Ditches are free of obstructions
  - Culverts are open and free of solid material
  - Drainage is not impeded
  - Runoff is being directed to the intended areas
  - There is no evidence of severe erosion to the ditches or culvert headwalls nor evidence of overflow from the ditches.

The ICDF Complex will be inspected daily for effectiveness of dust suppression controls.

Further details regarding the ICDF Complex inspections can be found in Appendix A of this O&M Plan. It should be noted that these are minimum requirements.

8.2 Landfill Inspections

The required inspections for the ICDF landfill will be conducted during the operation of the landfill. Landfill inspections will be performed weekly, unless otherwise noted, and following a significant storm event that may impact the safe operation of the landfill (40 CFR 264.303[b]). Inspections following a storm or other event will be conducted within 24 hours following the storm or, in the case of a weekend, holiday, or planned cessation of operations, during the next business day.

Inspections will be documented through the use of logbooks, checklists, or other appropriate electronic or hardcopy format. Inspections will be performed to determine the following:

- Deterioration, malfunctions, or improper operation of run-on/run-off control systems
- The presence of leachate in the collection and removal systems during operations and closure/postclosure
- Condition of level transducer to ensure it is operational so that the depth of leachate does not exceed 1 ft
- Proper functioning of the Leachate Collection Recovery System (40 CFR 264.303), or errors and discharges that may lead to the release of hazardous constituents or threat to human health (40 CFR 264.15[a])
- Condition of the landfill benchmarks that delineate the landfill perimeter (inspected annually) to ensure permanence.
- The effectiveness of soil fixative on exposed waste areas for dust control.

Further details regarding the ICDF landfill inspections can be found in Appendix A of this O&M Plan.

Inspection requirements for the ICDF landfill crest pad building, including but not limited to structural elements, HVAC, sumps, pumps, alarm systems, instrumentation, and mechanical systems, are detailed in Appendix A of this O&M Plan.

8.3 Evaporation Pond Inspections

The required inspections for the ICDF evaporation pond will be conducted during the operation of the evaporation pond cells. Inspections will be made weekly and following significant storms, including sustained wind in excess of 35 mph (40 CFR 264.226[b]), and will be documented through the use of logbooks, checklists, or other appropriate electronic or hardcopy format. Inspections following a storm or other event will be conducted within 24 hours following the storm or, in the case of a weekend, holiday, or planned cessation of operations, during the next business day.

Inspections will be performed for malfunctions and deterioration, improper operation of overtopping control systems, water level fluctuations, severe erosion or other signs of deterioration of dikes and other containment devices, and discharges that may lead to the release of hazardous constituents or threat to human health (40 CFR 264.15[a]; 40 CFR 264.226 [b][1,2,3]). During these inspections, the following activities will be conducted:

- Inspect and record the water level of both pond cells (40 CFR 264.226 [d][1])]
- Inspect to ensure that the minimum of 2 ft of freeboard (the distance from the water surface to the top of the berm) is being maintained
- Inspect to ensure the ballast tube system is intact
- Inspect for evidence of liner wind lift in empty areas.

Further details of the ICDF evaporation pond inspections can be found in Appendix A of this O&M Plan.

Inspection requirements for the evaporation pond crest pad building, including but not limited to, structural elements, HVAC, liquid level in sumps, pumps, alarm systems, instrumentation, and mechanical systems, are detailed in Appendix A of this O&M Plan.

8.4 Waste Storage/Staging Inspections

The required waste storage/staging inspections will be conducted during the operation of the waste storage/staging areas as defined in Section 5 of this O&M Plan. Inspections will be performed weekly, unless otherwise noted, and following a significant storm event, including sustained wind in excess of 35 mph or other event that may impact the safe operation of the staging areas. Inspections will be documented through the use of logbooks, checklists, or other appropriate electronic or hardcopy format. Further details of waste storage/staging area inspections can be found in Appendix A of this O&M Plan.

Inspections will be performed for malfunctions and deterioration, operator errors, and discharges that may lead to the release of hazardous constituents or threat to human health (40 CFR 264.15 [a] and [c]).

Waste storage/staging area inspections will not be performed when there is not waste stored or staged within the designated area.

All waste storage/staging areas identified in Section 5 of the O&M Plan will be inspected for the following:

8.4.1 Area Management

- There is adequate aisle space for personnel and equipment to respond to emergencies and/or conduct inspections.
- All wastes are segregated within the area to maintain requirements for compatibility.
- Quantities/containers recorded in the logbook equal quantities/containers staged in the area.
- Staged wastes have not been staged for more than 2 years or have submitted a justification for the extension.

8.4.2 Spills and Leaks

- Areas will be inspected for leaks and deterioration (40 CFR 264.174). Pads will be inspected for integrity.

8.4.3 Containment

- Containers staging liquids have secondary containment or are otherwise prevented from discharging through dikes or berms.
- Tarps over soil piles are secure.
- Liners under soil piles, where necessary, are placed and functioning to provide isolation of the pile.
- Dikes, berms, or pad design restrict run-on precipitation from entering staging areas.

8.4.4 Labeling

- All containers and bulk soil in the waste storage/staging areas will be inspected for proper signage and labeling depending upon the waste type.
- All container and bulk staging area labels, signs, and marks are visible to the inspector.

8.4.5 Containers

- Containers staged at the ICDF Complex will be inspected at least weekly for leakage and deterioration (40 CFR 264 Subpart I).

8.4.6 Emergency Response

- Emergency procedures as defined in the HASP (INEEL 2003) are present.

8.5 Decon Building Inspections

The required decon building inspections will be conducted during the operation of the decon building. As required by 40 CFR 264.1101(c)(4), the decon building shall be inspected every 7 days. The decon building has been designed to meet 40 CFR 264, Subpart DD, for containment buildings. The building will be operated and maintained per 40 CFR 264, Subpart DD. The inspection for the treatment unit within the decon building will be in accordance with this section. The inspections will be recorded in the facility's operating record and entail the following activities:

- Inspect and record data gathered from monitoring equipment and leak detection equipment, as well as the containment building and the area immediately surrounding the containment building, to detect signs of releases of hazardous waste (40 CFR 264.1101[c][4])
- Inspect for errors and discharges that may lead to the release of hazardous constituents or threat to human health (40 CFR 264.15[a]).

Further details regarding the decon building inspections can be found in Appendix A of this O&M Plan.

8.6 Tank Inspections

The required tank inspections will be conducted during the operation of the ICDF Complex. Daily inspections will be performed, if no leak detection system is installed, for the following:

- Aboveground portions of the tank system, if any, to detect signs of corrosion or releases of waste.
- Crest pad building sumps, pump station, and decon building tank system to determine the water level.
- Data gathered from monitoring and leak detection equipment to ensure that the tank system is being operated according to its design.
- The construction materials and the area immediately surrounding the externally accessible portions of the tank system, including the secondary containment system, to detect erosion or signs of releases of hazardous waste.

- For tanks in the SSA or Tank and Container Storage Area, the liquid level in the secondary containment may have small fluctuations in the level because it may have an open top containment. Evaporation, precipitation, and liquid removal should be the only normal contributing factors in the liquid level. If the liquid level in a primary tank deviates from the recorded level, and there was no waste added or removed from the tank, then investigate the suspected leak.

  Further details on tank inspections can be found in Appendix A of this O&M Plan.

8.7 Corrective Actions

Actions that may precipitate releases of hazardous substances into the environment will be corrected within a timeframe proportional to/determined by the release. For example, sustained overtopping of the evaporation pond due to wind-driven spray must be addressed immediately through spill cleanup and reducing freeboard as much as practical. In another example, cracks in a pad adjacent to stored wastes should be repaired prior to using that portion of the pad. Depending on the nature of the stored wastes, appropriate interim measures may be necessary prior to completing the repair (e.g., placement of absorbents and/or increased inspections).

Minor deficiencies will be corrected as soon as practical to prevent cumulative effects that could lead to a potential release. For example, observations of labeling deficiencies, such as incomplete, illegible, damaged, or missing labels, represent a programmatic problem that must be corrected. Repeated minor deficiencies will be evaluated for root cause and appropriate actions developed to eliminate the cause prior to escalation of the problem.

9. NOTIFICATION AND SUBMITTALS

During the operational life of the ICDF Complex, numerous notifications and data submittals will be required. The FFA/CO outlines the procedures for submission of such data to the IDEQ and EPA. The ARARs determine the specific data/notification requirements. In addition to routine data submittals, such as annual reports, data must be submitted in the event of landfill or evaporation pond leakage, as described in Section 9.1.1, tank leakage as described in Section 9.1.2, or decon building leakage as described in Section 9.1.3, as required.

The ICDF Complex management will provide verbal notification to the Agencies for those activities outlined in this section that require notification at the time of an incident requiring corrective action. Resulting reports will be made to the regulatory Agencies for these instances. It is the intent of the ICDF Complex management to involve the Agencies in any substantive corrective actions and compliance issues as soon as practical; however, circumstances may arise which require ICDF Complex management to initiate corrective actions immediately. The following is a discussion of events that would require data submittals.

9.1 Spills and Releases

The following sections describe spill and release events that may occur as part of the ICDF Complex operations and the necessary notifications and or submittals for these events.

9.1.1 Landfill or Evaporation Pond Leakage

The Leachate Collection Recovery System is located immediately above the uppermost composite liner of the landfill bottom liner system, and a leak detection system is located beneath both composite liners of the landfill. The LDRS is the uppermost leak monitoring system (located just below the primary liner) which will be monitored continually for leaks. Beneath the lower composite (secondary) liner is the SLDRS. The LDRS must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and postclosure care period. The SLDRS monitors leaks from beneath a portion of the bottom liner system in the area of leachate collection piping and sump. Only the LDRS has an ALR established for its operation. The ALR sets action levels for performance requirements of the primary liner system.

The evaporation pond cells also have a LDRS located between their primary and secondary liners. Like the landfill LDRS, the LDRS for the pond must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and postclosure care period. The LDRS for the evaporation pond has an established ALR, which sets the performance requirements for this system.

A requirement of 40 CFR 264.302(b) is that the owner or operator must convert the weekly or monthly flow rate from the monitoring data obtained under 40 CFR 264.303(c) to an average daily flow rate (gal per acre per day) for each sump in order to determine whether the ALR has been exceeded. The average daily flow rate for each sump must be calculated weekly during the active life and closure period, and monthly during the postclosure care period when required under 40 CFR 264.303(c).

If the flow rate into the LDRS of the landfill or LDRS of the evaporation pond cells exceeds the ALR for any sump, the ICDF Complex management and DOE-ID must perform the following schedule of Agency notifications:

- ICDF Complex management will notify DOE-ID at the time that the flow exceedence of the ALR is identified.

- DOE-ID will provide written notification (e.g., email, fax) to the IDEQ and EPA that the flow is determined to have exceeded the ALR as soon as is practical (not to exceed 7 days) after making the determination.

- DOE-ID will provide written information of the incident to the IDEQ and EPA, regarding the amount of liquids; possible location, size, and cause of any leaks; and short-term actions taken and planned. The information will be provided within 14 days of the determination.

- DOE-ID, in consultation with the IDEQ and EPA, will prepare a corrective action plan detailing the results of analyses, actions taken, and actions planned.

- As long as the flow exceeds the ALR, DOE-ID will prepare and submit monthly written notice to the IDEQ and EPA detailing additional actions taken and actions planned.

Operational procedures and inspections for the leak detection systems of the landfill and evaporation ponds are located in Appendix A.

9.1.2 Tank Leakage or Spills

Several tanks exist at the ICDF Complex including:

- Pump station

- Decon building tank system:

  - Concrete P-trap

  - Oil/water separator

  - Ancillary piping

- ICDF Complex storage tank(s).

A tank system that is part of the ICDF Complex from which there has been a leak or spill or is unfit for use must be removed from service immediately. The contents of the leaking tank may require removal to another tank, or, if acceptable, to the evaporation pond. The ICDF Complex management will report any leak, spill, or release through existing INEEL channels. Spill reporting is discussed in the HASP (INEEL 2003). In addition, periodic Agency conference calls will discuss upset conditions. If the release has been reported pursuant to 40 CFR 302, that report will satisfy this requirement. A leak or spill of hazardous waste is exempted from the requirements if it is less than or equal to the reportable quantities and immediately contained and cleaned up. The ICDF Complex will use the same spill reporting and reportable quantities that are used throughout the INEEL.

9.1.3 Decon Building Leakage

If a release of hazardous waste from the decon (containment) building has been detected, the following actions must be taken by DOE-ID (40 CFR 264.1101):

- A record of discovery must be filed in the ICDF Complex operating record.

- Immediately remove the portion of the decon building affected by the condition from service.

- Determine what steps must be taken to repair the decon building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs.

- Notify the EPA and IDEQ of the condition and provide a written notice with a description of the steps taken to repair the decon building and the schedule for accomplishing the work. Notifications will be performed as soon as is practical, not to exceed 7 days.

Upon completing all repairs and cleanup, the DOE-ID must notify the Agencies in writing and provide verification, signed by a qualified, registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with 40 CFR 264.1101(c)(3)(i)(D).

9.2 Sampling Events and Data Submittals

Several routine sampling events will occur at the ICDF Complex, which will require submittals of the data. The routine monitoring, analyzing, and reporting of groundwater data will be conducted for the ICDF Complex. The groundwater monitoring process is discussed in DOE-ID (2002f).

9.2.1 Groundwater Monitoring Data Submittals and Notifications

The ICDF Complex will conduct a detection monitoring program in the SRPA in accordance with 40 CFR 264.97(g) and the ICDF Complex Groundwater Monitoring Plan (DOE-ID 2002f). The ICDF Complex will maintain a record of groundwater analytical data as measured and in a form necessary for the determination of statistical significance under 40 CFR 264.97(h). For further information regarding the groundwater monitoring programs, see DOE-ID (2003f) and DOE-ID (2002f). Data submittals and notifications are summarized in Table 9-1.

Although not part of the detection monitoring program at this time, water quality will also be monitored concurrently in the perched water and data reported to the Agencies in accordance with the FFA/CO. During routine monitoring of the SRPA, water levels will be checked in the perched water wells. If sufficient water is available, samples will be collected in accordance with the ICDF Complex Groundwater Monitoring Plan (DOE-ID 2002f). If the decision is made by the Agencies that it is appropriate to add the perched water wells to the detection monitoring network, Appendix H of this document (DOE-ID 2003f) will be modified.

9.2.2 Nongroundwater Monitoring Data Submittals and Notifications

In addition to groundwater, other media such as waste soil, pond water and sediment, and leachate will be sampled. Several documents discuss this sampling: the ICDF Complex SAP for SSSTF Waste Stabilization Operations (DOE-ID 2003g), ICDF Complex Waste Verification SAP (DOE-ID 2003d), and ICDF Complex O&M SAP (DOE-ID 2003e).

Table 9-1 indicates sampling at the ICDF Complex for a variety of purposes, as discussed in the referenced SAPs. The table provides a summary of the media that will be sampled under each SAP and indicates whether a data report will be developed and submitted to IDEQ and EPA. Sampling data that are collected but not submitted in a report to IDEQ and EPA will be maintained in the ICDF Complex project records and the data packages will be sent to IDEQ and EPA in accordance with Section 19 of the FFA/CO (DOE-ID 1991).

Table 9-1. Site sampling/data submittal summary.

Document Where Data Submittal is Required	Sample Area	Sampling Locations	Media Type	Agency Submittal
ICDF Complex Waste Verification Sampling and Analysis Plan (DOE-ID 2003d)	INEEL	Varies[a]	Waste soil - source material	Data maintained in ICDF Complex project records[b]
ICDF Complex SAP for SSSTF Waste Stabilization Operations (DOE-ID 2003g)	ICDF Complex	Treatment unit by batch	Waste soil - treated material	Data maintained in ICDF Complex project records[b]
ICDF Complex Operational and Monitoring Sampling and Analysis Plan (DOE-ID 2003e)	ICDF Complex	Evaporation pond	Pond water and sediment	Annual report
	Evaporation pond	Leachate Collection Recovery System	Leachate	Data maintained in ICDF Complex project records[b]
	Landfill	Leachate Collection Recovery System	Leachate	Data maintained in ICDF Complex project records[b]
	Landfill	PLDRS sump SLDRS sump	Leak detection liquid	Data maintained in ICDF Complex project records[b]
ICDF Complex Groundwater Monitoring Plan (DOE-ID 2002f)	SRPA wells	USGS-123, ICPP-1782, ICPP-1783, ICPP-1800, ICPP-1829, and ICPP-1831	Groundwater	Data submitted in accordance with FFA/CO Annual report
	Perched water wells	PW-1, PW-6, ICPP-1781, ICPP-1801, ICPP-1802, ICPP-1803, ICPP-1804, and ICPP-1807	Groundwater	Data submitted in accordance with FFA/CO Annual report
ICDF Groundwater Detection Monitoring Program: Data Analysis Plan (DOE-ID 2003f)	SRPA wells	SRPA wells	SRPA water	Upon identification of statistically significant difference – Agency conference call and follow-up report

a. Sampling location is dependent on the source of the material and the key parameter properties.
b. Data will be submitted in accordance with Section XIX of the FFA/CO (DOE-ID 1991).

9.3 Operational Reports

Operational reports are reports that are not submitted to the IDEQ or the EPA but are kept onsite in the ICDF Complex records. An example of this information is an inspection checklist, as discussed in Section 8, Inspections. Other information, including dike structural certification, tank certification, and operating record with location of waste, is discussed below.

9.3.1 Waste Generation and Tracking

Documentation of the source of the waste streams and locations in the landfill where the waste was placed will be kept in the project files.

9.3.2 Complex Facility Operations

Records of daily ICDF Complex facility operations must be kept. Examples of record topics are sample/shipping and field instruments calibration/standardization.

9.3.3 Individual Units (Landfill, Evaporation Pond, Staging Area)

Examples of reports for individual units are evaporation pond dike structural certification, tank certification, and instrument inspection checklists. These, and any other operational reports, will be kept in the project files.

9.4 Emergency Response and Alarm Operation

The ICDF Complex personnel will be prepared to respond to many different kinds of emergencies. The following are general descriptions of actions the ICDF Complex management/personnel will perform to demonstrate emergency preparedness:

- Ensure that personnel are dedicated and trained to investigate and report events and conditions effectively and in a timely and unbiased manner
- Ensure that the timely and appropriate response action to stabilize and mitigate the event is appropriate and commensurate with training and qualification
- Categorize and make notifications to designated organizations and the Agencies, if required
- Prepare investigation and notification reports and provide event closure and root cause information to correct the condition and prevent recurrence
- Provide lessons learned and address additional training needs as needed.

10. RECORDS MANAGEMENT

This section provides an overall view of the ICDF project records program and serves as a basic foundation to manage and control ICDF records in accordance with DOE, Environmental Restoration (ER) Program, and other applicable requirements. Following the introduction, information is presented on purpose, scope, and applicability; responsibilities; interfaces; process; and record categories.

10.1 Introduction

Section 10, Records Management, provides guidance for ICDF personnel and supporting interfaces responsible for the generation and preservation of adequate records documenting ICDF operations, policies, decisions, procedures, and essential transactions. It focuses on ensuring effective records management procedures are used to capture and protect those records from loss, damage, destruction, or unauthorized revision. This section also identifies specific activities required to satisfy the objectives of governing company procedures including records inventory, identification, control, turnover, and final disposition. Organizational interfaces, responsibilities, and special considerations are also addressed in this section.

All records entered into the IWTS, (e.g., Material Profile, OWTF, Container Profiles, and waste volumes and disposition) will also be maintained using IWTS.

10.2 Purpose, Scope, and Applicability

This section defines the scope, applicability, regulatory basis, and methods for managing records generated by the ICDF Complex project. This document was written in accordance with the management and operations requirements, DOE, and the FFA/CO (DOE-ID 1991).

This section also defines the responsibilities, authorities, and interfaces required for consistent care of information, regardless of media used, throughout the ICDF project's life cycle (i.e., creation or receipt, maintenance, storage, and disposition) using the applicable ER Program requirements set forth by the FFA/CO, Section XX, Retention of Records and Administrative Record.

The records management process described in this section applies to the ICDF Complex project records. Records for the Occupational Medical Program, emergency preparedness, and security are managed in accordance with that organization's specific procedures and are not covered as part of this section.

Formal processes ensure records are

- Generated, inventoried, and identified in accordance with approved procedures
- Approved, authenticated, and scheduled for disposition
- Indexed and incorporated into the ER Electronic Document Management/Optical Imaging System (EDM/OIS)
- Accounted for and controlled to protect against loss or unauthorized access
- Retrieved efficiently

- Transferred periodically to INEEL Records Management Organization (RMO) for temporary storage until they are sent to the Federal Retention Center/National Archives and Records Administration (FRC/NARA)

- Dispositioned in accordance with applicable requirements, procedures, and authorized schedules approved by the NARA.

10.3 Records Management Responsibilities

The WAG 3 project administrator (PA) is responsible for the management and maintenance of the ICDF records.

General responsibilities for the creation, identification, inventory, control, storage, and disposition of records discussed in this document are specific to the ICDF project. Table 10-1 summarizes record management responsibilities.

Records generated by ICDF activities will be transmitted to the authorized WAG 3 records coordinator for inclusion in the ER Records Management Program. The ICDF PA who is designated as WAG 3 record liaison will coordinate records management activities with the ER and INTEC Records Management Program to ensure ICDF records management practices are consistent and compatible with the ER and INEEL records management requirements.

10.4 Records Management Interfaces

ICDF project records management interfaces are shown in Figure 10-1. The records managed within the ER EDM/OIS constitute the official record copy of ICDF-generated documents and shall be accessible to ICDF project personnel on the appropriate media, electronic or hard copy.

10.5 Records Management Process

The ICDF operations effectively processes records as specified in company and project-specific documents.

The record coordinator processes all project records. This ensures that records are processed methodically and uniformly. The record coordinator also verifies that all records are complete before submittal to document control, Administrative Record and Information Repository (AR/IR) determination is made, and submittal to the EDM/OIS. In addition, the record coordinator verifies required retention periods and ensures records are available for inspections, reviews, and other requests as necessary.

All identified project records are retained according to requirements. All records will be maintained per Section XX of the FFA/CO. Figure 10-2 illustrates the project record management process.

The ER/DMCS processes all revision-controlled documents.

Table 10-1. Record management responsibilities.

Performer	Responsibilities
ICDF project manager	• Is responsible for the overall effectiveness and cohesiveness of the ICDF records regarding regulatory correspondence and monitoring activities
	• Read the ICDF Records Management section in the RAWP
ICDF operations manager	• Is responsible for the overall effectiveness and cohesiveness of the ICDF records management activities as described in this section
	• Read the ICDF Records Management section in the RAWP
	• Ensure that ICDF operations employees adhere to the requirements of this section of the O&M plan and applicable procedures
	• Ensure those employees transferring or terminating from the project are aware of their records-transferring responsibilities
WAG 3 PA	• Serve as the focal point between ICDF and the ER Program for records management initiatives
	• Present new and changed requirements and initiatives promulgated by the RMO to the PM and ICDF senior staff
	• Provide technical direction and guidance for record management activities
	• Is responsible for the oversight and maintenance of this plan at the direction of the ICDF project manager
	• Coordinate and implement record management initiatives and processes in accordance with this plan with concurrence from his/her manager
	• Perform the general duties of a qualified records coordinator
WAG 3 records coordinator	• Obtain all available training in records management, including, but not limited to, the training required under 40 CFR 264.16
	• Serve as the technical resource for his/her respective organizations on records management processes in accordance with this section and applicable procedures
	• Maintain records in accordance with this section, ER Program, and INEEL company requirements
Records originators/holders	• Read the ICDF Records Management section of the RAWP
	• Ensure that records are forwarded promptly to the WAG 3 records coordinator for storage and protection
	• Protect in-process records from loss or damage while in their possession
	• Transfer QA records to WAG 3 records coordinator using the appropriate transmittal form
Procedure originators/modifiers	• Read the ICDF Records Management section of the RAWP
	• Provide accurate record information on Form 412.16, "Data Input Sheet," for each new or revised controlled document

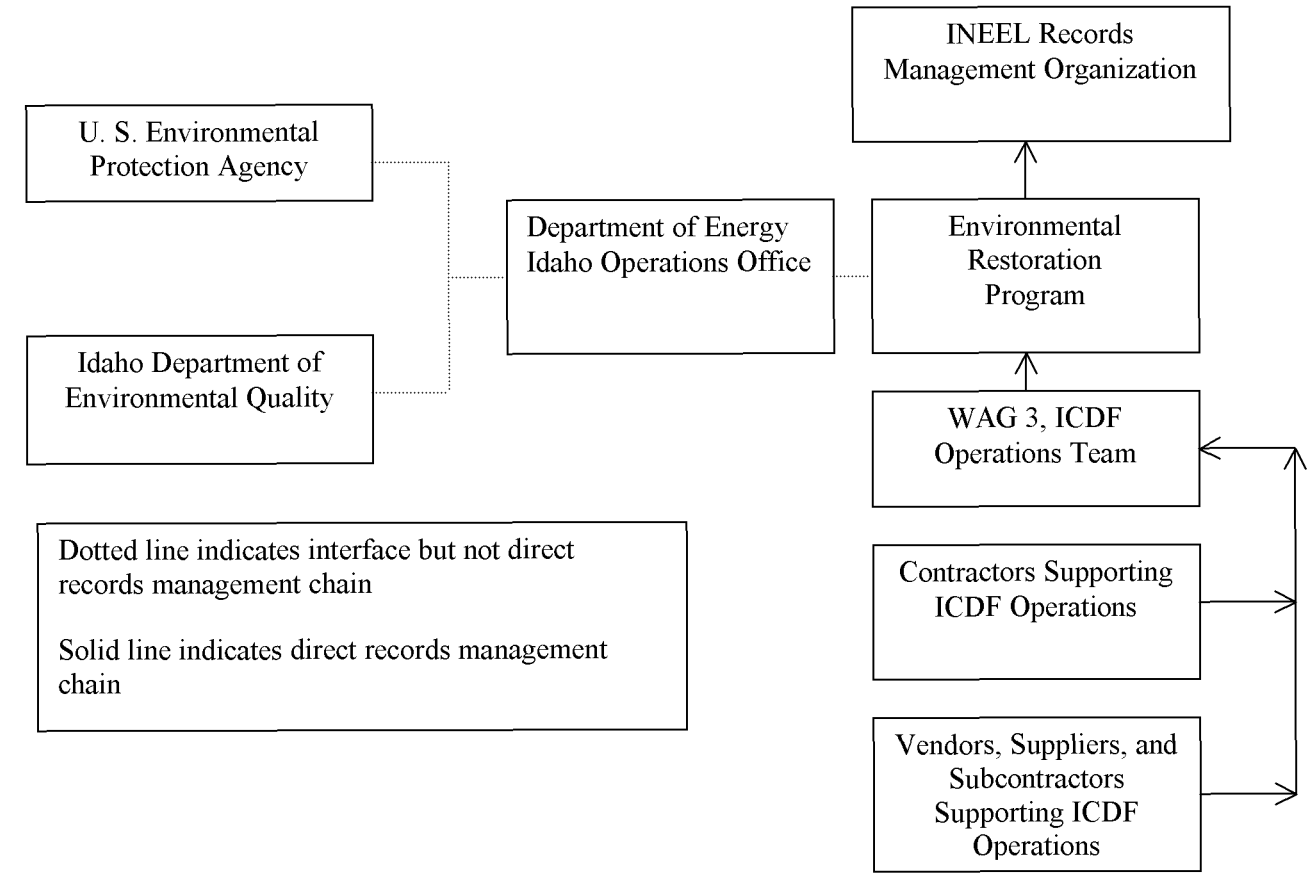

Figure 10-1. ICDF project records management interfaces.

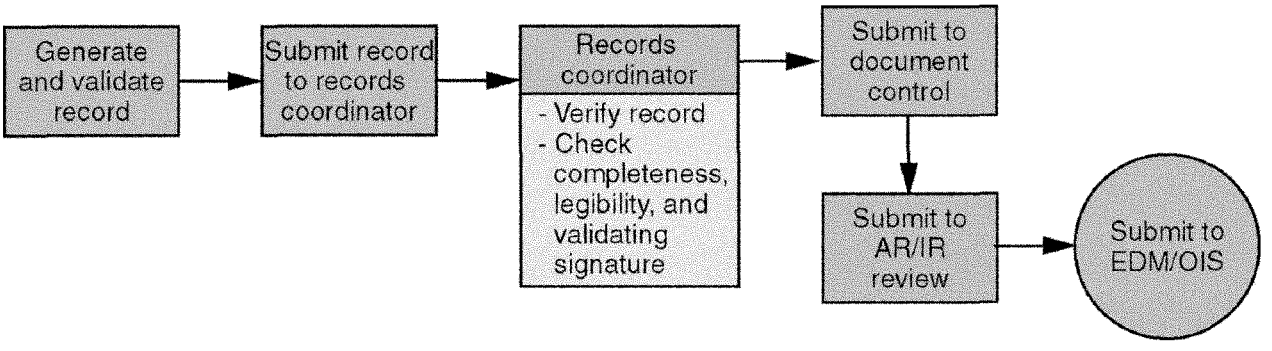

Figure 10-2. Record management process for the ICDF Complex project.

Project records will be readily accessible. The project's record copies are stored electronically in the EDM/OIS. This system implements the requirements of the FFA/CO and INEEL policies for records management and provides a long-term stewardship baseline. In addition, as a convenience to project personnel, a copy of project records/documents and reference materials are maintained in the project files during the life of the project for quick retrieval.

10.5.1 Records Inventory

The records inventory identifies record material and determines disposition schedules. Records inventory provides the foundation for the Records Management Program.

10.5.2 Records Identification

Record identification includes evaluating the inventoried records, selecting, characterizing, and creating the information to be controlled by the ER Records Management Program. Records generated shall be identified and coded through use of the company policies and procedures.

Consultation with the WAG 3 records coordinator may be necessary if any doubt exists concerning whether a document is a record. In addition to using the Uniform File Code system in the company procedures, it is necessary to define the record type, in order to determine record handling processes, retention times, and storage locations.

10.5.3 Records Control

Record control is the process of managing the receipt, verification, processing, storage, and retrieval of authenticated documents. Record control is accomplished through implementation of company procedures incorporating record management requirements. Revision of documents during storage is also an element of record control. ICDF record management personnel will use company procedures to document work processes. If necessary, supplemental instructions or procedures may be generated by the ICDF project.

10.5.3.1 Designation and Validation of QA Records. For records management purposes, a document is designated a QA record when it has been properly authenticated. Validation is the act of attesting that the information contained within a document is accurate, complete, and appropriate for the work accomplished. Managers and supervisors authorize individuals within their areas of responsibility to validate QA documents via reviews and approvals contained within the document in accordance with applicable company procedures.

In order for a QA document to be entered into the EDM/OIS, Form 416.04, "Record Transmittal Form," must be completed and accompany the document being sent to a central file location (CFL). A record coordinator will then index the record. Other methods may be used to designate quality assurance records (i.e., stamped, initialed, or signed and dated) as long as the QA designation is clearly specified.

NOTE: *Two stages of QA records exist: in process and completed. QA records become completed upon official turnover to the Records Center via Form 416.04, which contains a retention schedule and validation signature.*

10.5.3.2 Control. The WAG 3 records coordinator is responsible for processing the documents in accordance with applicable company procedures. Any governing procedure on the control of records shall address the following:

- Review and turnover of working files

- Records collection and receipt control
- Ensuring quality of records received
- Records indexing and accession numbering
- Maintenance of project record files
- Records retrieval.

10.5.4 Records Turnover

This process entails collection and incorporation of records from the ICDF project, including vendors, contractors and subcontractors, into the WAG 3 record coordinator and is accomplished through the use of steps in various procedures or contracts with performing organizations and contractors. It also entails the periodic transfer of records to the INEEL RMO. The overall ICDF records flow and turnover are shown in Figure 10-2.

10.5.4.1 Review and Validation of Records. Originators/owners of documents are responsible for reviewing the in-process documents for completeness and legibility before distribution and use. Prior to turning records over to a CFL, the record originators/owners or records custodian must validate the completeness of the QA record. The document should be reviewed to ensure all attachments, enclosures, and pages are included. Records must be legible and typed, printed, or written in ink. No information on any record shall be obliterated. Corrections should be a single line through the correction, initialed, and dated. No portion of any page should be missing due to tearing or folding of record edges that may obliterate recorded information. Photocopies of records should be as close to the original as possible and, preferably, not more than two generations from it.

10.5.4.2 Records Transfer. Owners, custodians, and coordinators of ICDF documents shall ensure documents meeting the criteria for records are forwarded to the WAG 3 records coordinator. Document owners shall ensure the records are authenticated (dated and signed, as appropriate) legible, accurate, and complete before transfer.

10.5.4.3 Records Collection Procedures. Records transmitted will be processed in accordance with the INEEL record management requirements and ER Records Management Program and company procedure regarding criteria for legibility and completeness. A final review of collected records will be performed by responsible record custodians/coordinators to evaluate and render a decision as to their acceptability. Any document judged unacceptable will be returned to the owner. The document owner, in accordance with this plan and applicable company procedures, will provide acceptable records to the record coordinator.

10.5.5 Records Storage

Active records will be maintained at ER CFL and be readily retrievable and available to ICDF, DOE, or other authorized personnel. Inactive records will be periodically transferred to the INEEL RMO for temporary storage until submittal to a Federal Records Center for final storage and dispositioning.

10.5.6 Records Disposition

Records disposition is the process of managing the disposal of temporary records or retention of permanent archival records as authorized by the DOE and NARA records schedules or alternate INEEL records schedules approved by NARA.

10.5.7 Retention and Disposal

Records disposition is the process of managing the disposal of temporary records or retention of permanent archival records following retention schedules and practices approved by NARA and DOE. When there are conflicting regulatory requirements with schedules from NARA, the most stringent requirements will apply. Nonrecord material will be destroyed when no longer needed.

10.5.8 Records Training

INEEL RMO trains and certifies records coordinators and, as necessary, responsible supervisors/ICDF personnel, records custodians/coordinators, and document originators/owners.

The training should be consistent with the activities being performed by the individual(s) to ensure all ICDF participants understand and comply with the requirements contained in this section.

Training session records will contain the following elements: date of the training session, training attendance record, name of the instructor, a copy of the instructor's lesson plan, a record of the actual training received, and a hard copy of any material distributed during the training session.

10.5.9 Electronic Records

Because the definition of records includes machine-readable materials, ICDF personnel shall ensure electronic records are maintained and processed following the same procedures for records in other media according to company policies and procedures dealing with electronic and other records. The definition of electronic records is "records created, stored, or transmitted using personal computers, word processors, and associated with office electronic record recording medium such as disk, diskette, tape, and tape cartridges".

Electronic mail (e-mail or Lotus Notes) may contain information that needs to be stored. Because many electronic mail systems automatically erase information after the recipient has read it, ICDF personnel must take positive action at the time such messages are generated to retain the record and transfer it to WAG 3 mail server.

Electronic records generated that cannot be converted to hard copy or other media for storage (e.g., tapes or compact disks) will be controlled and dispositioned in accordance with company procedure.

10.5.10 Self-Assessments

Self-assessments will be conducted to ensure the technical and quality performance levels of the ICDF record management organization are being maintained consistent with objectives of the ICDF. Any problems and/or discrepant conditions identified during the assessments will be analyzed for root cause, tracked, and have necessary corrective actions implemented to restore performance levels.

10.6 Record Categories

10.6.1 Quality Assurance Records

For records management purposes, QA records are completed documents or groups of documents that furnish evidence of the quality of items and/or activities affecting quality. Permanent operations QA records are transmitted to the WAG 3 records coordinator for processing into the ER EDM/OIS and are accessible to anyone having rights to the INEEL intranet. Types of QA records could include, but are not limited to, those described in Sections 10.6.2 through 10.6.5.

10.6.2 Environmental Records

All records associated with the environmental program and projects are considered environmental records and are retained and disposed of in accordance with the DOE environmental records schedule.

10.6.3 Freedom of Information Act Records

Freedom of Information Act (FOIA) records contain information, enacted by law, that is ensured to be furnished to the public, upon request, and is maintained by the DOE and its contractors (10 CFR 1004). Requests for these records from outside the INEEL shall be referred and processed through the company FOIA Office.

10.6.4 Operations Records

Operations records (these are not the operating records as required under RCRA) are records created to document the operations, maintenance, and performance of a facility or program. Types of operations records could include, but are not limited to, those listed below:

- Building freeze protection action lists
- Calibration procedures and data
- Checklist of emergency lights and exit signs
- Cold weather protection list
- Container storage area inspection logs
- Emergency equipment list
- Facility safety inspections
- Inspection records
- Instruments tag review
- Key checkout sheets
- Liquid transfer sheets
- Lockout/tagout logs
- Maintenance and in-service inspection records
- Modification drawings and work orders
- Operating logs and rounds sheets
- Operating procedures
- OSHA and technical label requirements
- Process and monitoring sheets
- Safe work permits

- Tank inspection logs
- Training and qualification records
- Waste solution transfer
- Winterization.

10.6.5 Safety Records

Safety records are records pertaining to the protection of personnel and facilities. Types of safety records could include, but are not limited to, those listed below:

- Auditable safety analysis (ASA)
- Environmental monitoring reports
- Soil and groundwater data
- Waste management and shipment data
- Data compiled on unplanned spills or leaks
- Records of radioactive gaseous waste discharge to the atmosphere and radioactive liquid waste discharge to surface or groundwater
- Radiation detection instrument calibration records
- Safety guides or safety procedures
- Safety management records.

10.6.6 Records Management Resources

Project personnel have several records management resources, including records management documents, records management and document control professionals, and a records management web site. These resources can be used to ensure records management concerns are addressed and resolved. Project personnel and records personnel use reviewed and approved record management implementing documents, which are readily accessible on the intranet.

10.6.7 ICDF Project File Index

As a subsystem to the company Uniform File Code, the ICDF project file indices and record types lists are organized by document types that are typically generated and updated, as needed, by assigned records coordinator. Table 10-2 gives a preliminary list of record types and their indices.

Table 10-2. Preliminary records indexing system.

Index	Record Type
01	Plans
02	Requirements Documents
03	Reports
04	Drawings and Models
05	Specifications
06	Change Control Documents
07	Interface Agreements
08	Engineering Design Files
09	Health & Safety Records
10	Management & Administration Records
11	Photographs
12	Design Review Packages
13	Procedures
14	Software
15	ORR Documents
16	FFA/CO Agency Documents
17	D&D&D Documents
18	Occurrence Reporting Documents
19	Construction Documents
20	Vendor Data
21	Procurement Documents
22	Test Data Records
23	Schedules
24	Controlled Equipment Lists
25	Communications
26	Planning and Controls Documents
27	Calibration Reports/Data
28	Audit, Assessment Records
29	Non-Conformance Documents
30	Independent Review Committee Records
31	Radiological Documents
32	Waste Management Documents
33	Survey Records
34	Laboratory Records
35	Videos
36	Sample Management Records
37	Permits
38	Community Relations Records
99	Resource Information

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